

LTC 8016/90



Security Systems

EN | Instruction Manual
Allegiant Bilinx
Data Interface

BOSCH

Important Safeguards

1. **Read, Follow, and Retain Instructions** - All safety and operating instructions should be read and followed before operating the unit. Retain instructions for future reference.
2. **Heed Warnings** - Adhere to all warnings on the unit and in the operating instructions.
3. **Attachments** - Attachments not recommended by the product manufacturer should not be used, as they may cause hazards.
4. **Installation Cautions** - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to a person and serious damage to the unit. Use only manufacturer-recommended accessories, or those sold with the product. Mount the unit per the manufacturer's instructions. Appliance and cart combination should be moved with care. Quick stops, excessive force, or uneven surfaces may cause the appliance and cart combination to overturn.
5. **Cleaning** - Unplug the unit from the outlet before cleaning. Follow any instructions provided with the unit. Generally, using a damp cloth for cleaning is sufficient. Do not use liquid cleaners or aerosol cleaners.
6. **Servicing** - Do not attempt to service this unit yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
7. **Damage Requiring Service** - Unplug the unit from the main AC power source and refer servicing to qualified service personnel under the following conditions:
 - When the power supply cord or plug is damaged.
 - If liquid has been spilled or an object has fallen into the unit.
 - If the unit has been exposed to water and/or inclement weather (rain, snow, etc.).
 - If the unit does not operate normally, when following the operating instructions. Adjust only those controls specified in the operating instructions. Improper adjustment of other controls may result in damage, and require extensive work by a qualified technician to restore the unit to normal operation.
 - If the unit has been dropped or the cabinet damaged.
 - If the unit exhibits a distinct change in performance, this indicates that service is needed.
8. **Replacement Parts** - When replacement parts are required, the service technician should use replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electrical shock or other hazards.
9. **Safety Check** - Upon completion of servicing or repairs to the unit, ask the service technician to perform safety checks to ensure proper operating condition.
10. **Power Sources** - Operate the unit only from the type of power source indicated on the label. If unsure of the type of power supply to use, contact your dealer or local power company.
 - For units intended to operate from battery power, refer to the operating instructions.
 - For units intended to operate **with External Power Supplies**, use only the recommended approved power supplies.
 - For units intended to operate with a limited power source, this power source must comply with EN60950. Substitutions may damage the unit or cause fire or shock.
 - For units intended to operate at 24VAC, normal input voltage is **24VAC**. Voltage applied to the unit's power input should not exceed 30VAC. User-supplied wiring, from the 24VAC supply to unit, must be in compliance with electrical codes (Class 2 power levels). Do not ground the 24VAC supply at the terminals or at the unit's power supply terminals.
11. **Coax Grounding** - If an outside cable system is connected to the unit, ensure that the cable system is grounded. U.S.A. models only - Section 810 of the National Electrical Code, ANSI/NFPA No.70, provides information regarding proper grounding of the mount and supporting structure, grounding of the coax to a discharge unit, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
12. **Grounding or Polarization** - This unit may be equipped with a polarized alternating current line plug (a plug with one blade wider than the other). This safety feature allows the plug to fit into the power outlet in only one way. If unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact an electrician to arrange replacement of the obsolete outlet. Do not defeat the safety purpose of the polarized plug. Alternately, this unit may be equipped with a 3-wire grounding plug (a plug with a third pin, for grounding). This safety feature allows the plug to fit into a grounding power outlet only. If unable to insert the plug into the outlet, contact an electrician to arrange replacement of the obsolete outlet. Do not defeat the safety purpose of the grounding plug.
13. **Lightning** - For added protection during a lightning storm, or when this unit is left unattended and unused for long periods of time, unplug the unit from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power line surges.

For Indoor Product

1. **Water and Moisture** - Do not use this unit near water - for example, in a wet basement, in an unprotected outdoor installation or in any area classified as a wet location.
2. **Object and Liquid Entry** - Never push objects of any kind into this unit through openings, as they may touch dangerous voltage points or short out parts that could result in a fire or electrical shock. Never spill liquid of any kind on the unit.
3. **Power Cord and Power Cord Protection** - For units intended to operate with 230VAC, 50Hz, the input and output power cord must comply with the latest versions of IEC Publication 227 or IEC Publication 245.
Power supply cords should be routed so they are not likely to be walked on or pinched. Pay particular attention to location of cords and plugs, convenience receptacles, and the point of exit from the appliance.
4. **Overloading** - Do not overload outlets and extension cords; this can result in a risk of fire or electrical shock.

For Outdoor Product

Power Lines - An outdoor system should not be located in the vicinity of overhead power lines, electric lights or power circuits, or where it may contact such power lines or circuits. When installing an outdoor system, extreme care should be taken to keep from touching power lines or circuits, as this contact might be fatal. U.S.A. models only - refer to the National Electrical Code Article 820 regarding installation of CATV systems.

For Rack-mount Product

1. **Ventilation** - This unit should not be placed in a built-in installation or rack, unless proper ventilation is provided, or the manufacturer's instructions have been adhered to. The equipment must not exceed its maximum operating temperature requirements.
2. **Mechanical Loading** - Mounting of the equipment in a rack shall be such that a hazardous condition is not achieved due to uneven mechanical loading.

Safety Precautions



CAUTION

RISK OF ELECTRIC SHOCK. DO NOT OPEN!



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates the presence of uninsulated "dangerous voltage" within the product's enclosure that can cause an electric shock.



This symbol indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.



Power Disconnect. Units with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON-OFF switch is in the ON position. The power cord is the main power disconnect for all units.

FCC & ICES INFORMATION

(U.S.A. and Canadian Models Only)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and ICES-003 of Industry Canada. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and radiates radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his expense.

Intentional or unintentional changes or modifications, not expressly approved by the party responsible for compliance, shall not be made. Any such changes or modifications could void the user's authority to operate the equipment. If necessary, the user should consult the dealer or an experienced radio/television technician for corrective action. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: How to Identify and Resolve Radio-TV Interference Problems. This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

WARNING: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take adequate measures.

Sécurité

	ATTENTION RISQUE D'ÉLECTROCUTION. NE PAS OUVRIR !	
ATTENTION : POUR ÉVITER TOUT RISQUE D'ÉLECTROCUTION, N'ESSAYEZ PAS DE RETIRER LE CAPOT (OU LE PANNEAU ARRIÈRE). CET APPAREIL NE CONTIENT AUCUN COMPOSANT SUSCEPTIBLE D'ÊTRE RÉPARÉ PAR L'UTILISATEUR. CONFIEZ LA RÉPARATION DE L'APPAREIL À DU PERSONNEL QUALIFIÉ.		
	Ce symbole signale que le produit renferme une « tension potentiellement dangereuse » non isolée susceptible de provoquer une électrocution.	
	Ce symbole invite l'utilisateur à consulter les instructions d'utilisation et d'entretien (dépannage) reprises dans la documentation qui accompagne l'appareil.	
	Attention : l'installation doit exclusivement être réalisée par du personnel qualifié, conformément au code national d'électricité américain (NEC) ou au code d'électricité local en vigueur.	
	Coupage de l'alimentation. Qu'ils soient pourvus ou non d'un commutateur ON/OFF, tous les appareils reçoivent de l'énergie une fois le cordon branché sur la source d'alimentation. Toutefois, l'appareil ne fonctionne réellement que lorsque le commutateur est réglé sur ON. Le débranchement du cordon d'alimentation permet de couper l'alimentation des appareils.	

Sicherheitshinweise

	VORSICHT ELEKTRISCHE SPANNUNG. NICHT ÖFFNEN!	
VORSICHT: UM EINEN ELEKTRISCHEN SCHLAG ZU VERMEIDEN, IST DIE ABDECKUNG (ODER RÜCKSEITE) NICHT ZU ENTFERNEN. ES BEFINDEN SICH KEINE TEILE IN DIESEM BEREICH, DIE VOM BENUTZER GEWARTET WERDEN KÖNNEN. LASSEN SIE WARTUNGSARBEITEN NUR VON QUALIFIZIERTEM WARTUNGSPERSONAL AUSFÜHREN.		
	Das Symbol macht auf nicht isolierte „gefährliche Spannung“ im Gehäuse aufmerksam. Dies kann zu einem elektrischen Schlag führen.	
	Der Benutzer sollte sich ausführlich über Anweisungen für die Bedienung und Instandhaltung (Wartung) in den begleitenden Unterlagen informieren.	
	Achtung! Die Installation sollte nur von qualifiziertem Kundendienstpersonal gemäß jeweils zutreffender Elektrovorschriften ausgeführt werden.	
	Unterbrechung des Netzanschlusses. Geräte mit oder ohne Netzschalter haben Spannung am Gerät anliegen, sobald der Netzstecker in die Steckdose gesteckt wird. Das Gerät ist jedoch nur betriebsbereit, wenn der Netzschalter (EIN/AUS) auf EIN steht. Wenn das Netzkabel aus der Steckdose gezogen wird, ist die Spannungszuführung zum Gerät vollkommen unterbrochen.	

Precauciones de Seguridad

	ATTENZIONE PERICOLO DI SCOSSA ELETTRICA. NON APRIRE.	
PRECAUCIÓN: PARA DISMINUIR EL RIESGO DE DESCARGA ELÉCTRICA, NO RETIRE LA CUBIERTA (NI LA PARTE POSTERIOR). NO EXISTEN PIEZAS DE RECAMBIO EN EL INTERIOR DEL EQUIPO. EL PERSONAL DE SERVICIO CUALIFICADO SE ENCARGA DE REALIZAR LAS REPARACIONES.		
	Este símbolo indica que existen puntos de tensión peligrosos sin aislamiento dentro de la cubierta de la unidad. Estos puntos pueden constituir un riesgo de descarga eléctrica.	
	El usuario debe consultar las instrucciones de funcionamiento y mantenimiento (reparación) en la documentación que se suministra con el aparato.	
	Atención: la instalación la debe realizar únicamente personal cualificado de conformidad con el National Electric Code o las normas aplicables en su país.	
	Desconexión de la alimentación. Las unidades con o sin interruptores de encendido/apagado reciben alimentación eléctrica siempre que el cable de alimentación esté conectado a la fuente de alimentación. Sin embargo, la unidad sólo funciona cuando el interruptor está en la posición de encendido. El cable de alimentación es la principal fuente de desconexión de todas las unidades.	

Veiligheidsmaatregelen

	VOORZICHTIG GEVAARVOOR ELEKTRISCHE SCHOK. NIET OPENEN!	
VOORZICHTIG: OPEN DE BEHUIZING OF DE ACHTERKANT VAN HET APPARAAT NIET. ZO VERMINDERT U HET RISICO OP ELEKTRISCHE SCHOKKEN. IN HET APPARAAT BEVINDEN ZICH GEEN ONDERDELEN DIE U ZELF KUNT REPAREREN. LAAT SERVICE EN ONDERHOUD UITVOEREN DOOR GEKwalificeerd PERSONEEL.		
	Dit symbool geeft aan dat er binnen in het apparaat ongeïsoleerde, gevaarlijke spanning aanwezig is die mogelijk elektrische schokken kan veroorzaken.	
	De gebruiker dient de bedienings- en onderhoudsvoorschriften te raadplegen in de documentatie die werd meegeleverd met het apparaat.	
	Attentie: het apparaat mag alleen door gekwalificeerd personeel worden geïnstalleerd. De installatie dient in overeenstemming met de nationale elektrische richtlijnen of de van toepassing zijnde lokale richtlijnen te worden uitgevoerd.	
	Spanning uitschakelen. Apparatuur met of zonder aan-uitschakelaar staat onder spanning zolang de stekker is aangesloten op de wandcontactdoos. De apparatuur is uitsluitend in werking als de aan-uitschakelaar aan staat. Het netsnoer is de "hoofdschakelaar" voor alle apparatuur.	

Medidas de Segurança

	CUIDADO RISCO DE CHOQUE ELÉCTRICO. NÃO ABRIR!	
CUIDADO: PARA REDUZIR O RISCO DE CHOQUE ELÉCTRICO, NÃO RETIRE A TAMPA (OU A PARTE POSTERIOR). NO INTERIOR, NÃO EXISTEM PEÇAS QUE POSSAM SER REPARADAS PELO UTILIZADOR. REMETA A ASSISTÊNCIA PARA OS TÉCNICOS QUALIFICADOS.		
	Este símbolo indica a presença de "tensão perigosa" não isolada dentro da estrutura do produto, o que pode constituir risco de choque eléctrico.	
	O utilizador deve consultar as instruções de funcionamento e manutenção (assistência) nos documentos que acompanham o aparelho.	
	Atenção: a instalação deve ser executada apenas por técnicos qualificados da assistência, de acordo com o código eléctrico nacional ou os códigos locais aplicáveis.	
	Corte de corrente. As unidades com ou sem interruptores ON-OFF (ligar/desligar) recebem corrente sempre que o fio de alimentação está introduzido na fonte de alimentação; contudo, a unidade apenas está operacional quando o interruptor ON-OFF está na posição ON. O fio de alimentação destina-se a desligar a corrente em todas as unidades.	

Sicurezza

	ATTENZIONE PERICOLO DI SCOSSA ELETTRICA. NON APRIRE.	
ATTENZIONE: PER RIDURRE IL RISCHIO DI SCOSSE ELETTRICHE NON RIMUOVERE LA COPERTURA (O IL PANNELLO POSTERIORE). L'UNITÀ NON CONTIENE COMPONENTI INTERNI RIPARABILI DALL'UTENTE. PER QUALSIASI INTERVENTO, RIVOLGERSI A PERSONALE TECNICO QUALIFICATO.		
	Questo simbolo indica la presenza di "tensione pericolosa" non isolata all'interno del contenitore del prodotto. Ciò comporta un potenziale rischio di scosse elettriche.	
	Si consiglia di consultare le istruzioni operative e di manutenzione (interventi tecnici) contenute nella documentazione fornita con il dispositivo.	
	Attenzione: l'installazione deve essere effettuata esclusivamente da personale tecnico qualificato in conformità con il National Electrical Code o con le normative locali vigenti.	
	Scollegamento dell'alimentazione. Le unità dotate o sprovviste di interruttori ON-OFF vengono alimentate quando si inserisce il cavo nella presa dell'alimentazione. L'unità è tuttavia in funzione solo quando l'interruttore ON-OFF si trova nella posizione ON. Il cavo di alimentazione costituisce il dispositivo di scollegamento dell'alimentazione principale per tutte le unità.	

安全预防措施

	CAUTION RISK OF ELECTRIC SHOCK. DO NOT OPEN!	
注意：为避免受到电击，不要拆除机盖（或后盖）。用户不得擅自维修里面的部件。有关维修事项，请咨询合格的维修人员。		
	此符号表示产品机壳内存在未绝缘的“危险电压”。这可能导致电击。	
	用户应参照设备附带的操作和维护（维修）说明。	
	注意：安装须由合格的维修人员遵照美国国家电工标准或相关电气规则进行。	
	断开电源。在电源线插入电源时，配备或未配备 ON-OFF 开关的设备都已通电；但设备只有在 ON-OFF 开关处于 ON 位置时才能工作。对于所有设备，电源线是断开电源的主要方式。	

Table of Contents

Important Safeguards	2
FCC & ICES Information	4
1.0 UNPACKING	7
2.0 SERVICE	7
3.0 DESCRIPTION	7
3.1 General	7
3.2 Power	7
3.3 Compatibility Information	7
4.0 INSTALLATION	8
4.1 Enclosure Mounting and Location Selection	8
4.2 Connections to AC Power	8
4.3 Camera Video Connections	8
4.4 Group ID Number	9
4.5 Video Connections to the Controller Unit	12
4.6 Allegiant Series Switcher Data Interface	14
4.7 Data Connection to a Biphasic Generating Device	15
4.8 Data Connections Using Biphasic RS-232 Protocol	16
5.0 TYPICAL CONFIGURATION DIAGRAMS	17
6.0 OPERATION	20
7.0 DEVICE OUTLINE	20
8.0 CONNECTOR AND CABLE PINOUTS	20
8.1 LTC 8016 Connector Pinouts	20
8.2 Supplied Serial Data Cable Pinouts	21
8.3 Miscellaneous Cables	21
9.0 MAINTENANCE	21
10.0 TROUBLESHOOTING	22
11.0 LED INDICATORS	22
12.0 REPLACEMENT PARTS	22
13.0 COMMON ACCESSORY PARTS	22
APPENDIX A - GROUP ID SETTINGS FOR LARGE SYSTEMS	23

1.0 UNPACKING

This equipment should be unpacked and handled with care. If an item appears to have been damaged in shipment, notify the shipper.

Verify that all parts shown in the *Parts List* have been included. If any items are missing, notify your Bosch Security Systems Sales or Customer Service Representative.

The original packing carton is the safest container in which to transport the unit. Save it for possible future use.

1.1 Parts List

Qty	Item
1	LTC 8016/90 16-channel data interface unit
2	AC power cords (one for 120 VAC, and one for 220 - 240 VAC)
1	2 m (6 ft) 16-Conductor video ribbon cable
1	3 m (10 ft) Data interface cable
1	6-Position terminal block with 100Ω terminating resistor
2	Rack-mount brackets
1	Offset screwdriver (star & slot ends)
1	This installation manual

2.0 SERVICE

If the unit needs repair, contact the nearest Bosch Security Systems Service Center for authorization to return and shipping instructions.

Service Centers

USA

Phone: 800-366-2283 or 717-735-6638

Fax: 800-366-1329 or 717-735-6639

CCTV Spare Parts

Phone: 800-894-5215 or 408-956-3853 or 3854

Fax: 408-957-3198

E-mail: BoschCCTVparts@ca.slr.com

Canada

Phone: 514-738-2434

Europe, Middle East & Asia Pacific Region

Phone: 32-1-440-0711

For additional information, see

www.boschsecurity.com.

3.0 DESCRIPTION

3.1 General

The LTC 8016 Allegiant Bilinx Data Interface Unit is an accessory device used to provide two-way communication between a controller and up to 16 Bilinx-capable cameras. Full control of pan/tilt/zoom functions and processing of camera alarm/events are supported. The Interface unit is especially suited for use with the Allegiant Series Matrix Switcher/Controllers.

When connected to a head-end device generating biphasic control code, single direction communication is available for control of pan/tilt/zoom, auxiliaries and pre-positions of Bilinx- compatible cameras.

Camera setup is simplified when the Interface Unit is used with the AutoDome Series of P/T/Z cameras, since programming of the dome camera address is no longer required. In addition to conventional CCTV coax, configuration solutions are available for other compatible video/data transmission products, such as unshielded twisted pair (UTP) products and fiber optic links.

3.2 Power

Model No.	Rated Voltage	Voltage Range	Nominal Power
LTC 8016/90	120 /230 VAC, 50/60 Hz	105 to 253	15 W

3.3 Compatibility Information

Although any device generating a standard video signal can be connected to the Allegiant Bilinx Data Interface Unit, it is only capable of **communicating** with devices that are compatible with Bilinx technology.

If the unit is being connected to any of the following devices, they must meet the following minimum specifications:

- Allegiant Series Switcher/Controller firmware 8.6 (released May, 2004) or later is required if using the Allegiant data interface connection.
- AutoDome Series Camera models with firmware 5.11 (released October, 2003) or later is required.
- Dinion Series Cameras that were manufactured after March 2004.

- Any Dinion^{XF} Series Cameras manufactured after April 2004.
- Any controller device generating Allegiant biphasic P/T/Z control code protocol.

4.0 INSTALLATION

The Allegiant Bilinx Data Interface Unit should be installed in a suitable indoor environment free from excessive dust, moisture and temperature extremes.

Setup of the Allegiant Bilinx Data Interface Unit is quick and easy. Follow the steps listed below. If a particular step does not apply to your configuration, proceed to the next step.

4.1 Enclosure Mounting and Location Selection

The Allegiant Bilinx Data Interface Unit is supplied in a desktop enclosure. If the unit is to be installed into a standard EIA 19-inch rack, remove the four (4) rubber footpads on the bottom. Use the supplied offset screwdriver to remove two (2) star head screws located on each side near the front of the unit. Then attach the supplied rack mounting brackets to the unit. The unit can then be installed into the rack with user-supplied fastening hardware.

Since video signal connections need to be made between the Interface Unit and the main system control unit, the physical distance between them should be taken into consideration. Connection between the LTC 8016 and the control device is via a 34-pin video ribbon cable. A 2 m (6 ft) video ribbon cable is supplied, but if the controller does not support this type of video connection, optional accessory products are required. If unsure of the available connection methods, refer to the *Section VIDEO CONNECTIONS TO CONTROLLER UNIT* found later in the manual.

4.2 Connections to AC Power

Connect the appropriate power cord to the AC main source. If the cord termination is not suitable for connection to the main AC supply, modification to the cord, or a locally sourced cord with the correct end style is required.

4.3 Camera Video Connections

There are two banks of BNC inputs on the rear panel of the Interface Unit: 1-8 and 9-16. The inputs are designed to accept standard composite video signals, and are fixed at 75Ω termination. The unit accepts NTSC or PAL video signals. Both Bilinx and non-Blinx cameras can be connected to a bank of inputs, but at least one Bilinx camera must be connected to the bank in use, or it will enter a search mode and cause a periodic video disturbance. If more than 8 cameras are connected to the unit, both banks must have at least one Bilinx camera connected to it.

BILINX TECHNOLOGY PROVIDES ADJUSTMENT AND CONFIGURATION CAPABILITIES FOR COMPATIBLE CAMERAS FROM THE CONTROLLER LOCATION. THERE'S NO NEED TO PRE-PROGRAM CAMERA OPTIONS OR CONFIGURE CAMERA ADDRESSES.



Coax communication must not exceed 300 m (1000 ft) when using RG-59U grade CCTV coax, or 600 m (2000 ft) when using RG-6 or RG-11 grade coax.

There are other types of video transmission devices that are compatible with Bilinx technology. The LTC 4630 & LTC 4631 Series can transmit Bilinx video signals via fiber optics, up to a maximum of 600 m (2000 ft). It is also possible to use CAT-5 grade cable connected to Balun devices, to achieve distances of up to 225 m (750 ft).

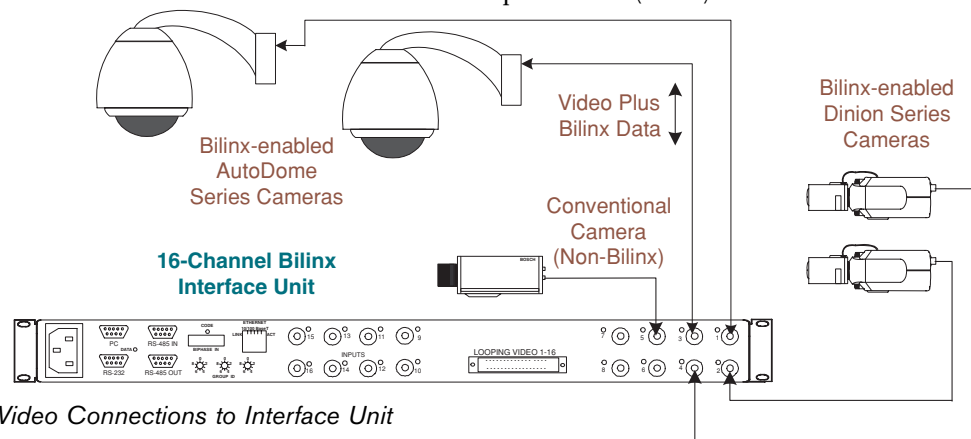


Figure 1 Typical Video Connections to Interface Unit

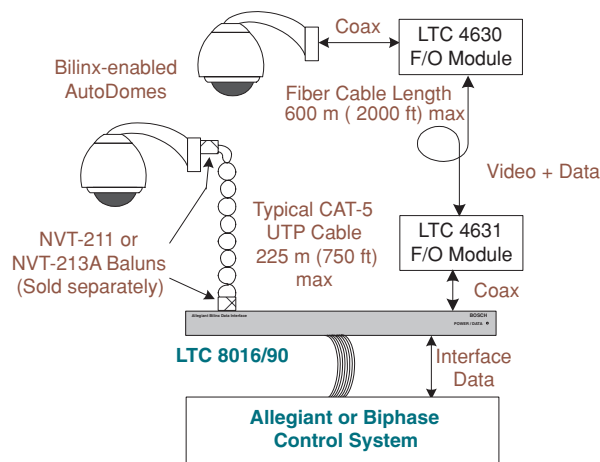


Figure 2 Interface Unit Used with Other Video Transmission Technologies



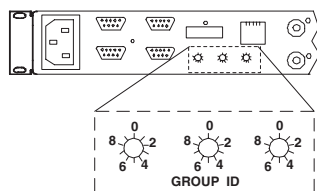
NOTE: The video signal and Bilinx control data require unobstructed two-way communication. Do not place **active** video devices in the coax line, because it will block the control data signals.

Passive devices, such as ground loop isolation transformers or other devices specifically designed to support Bilinx communication, can be placed in the coax line. In some configurations, it may be possible to connect an active device **after** the video passes through the head-end control unit. For sample applications, refer to the *Typical Configuration Diagrams Section* found later in this manual.

When an operating camera is connected to the Interface Unit, the video channel LED illuminates GREEN to indicate the presence of an acceptable video signal. As Bilinx control data is sent to or received from Bilinx-enabled cameras, the respective channel LED flashes accordingly.

4.4 Group ID Number

The rear panel of the Interface Unit contains a set of 3 rotary switches, as shown below. Use the straight slot side of the supplied offset screwdriver to set the switches to the necessary value.



These switches are used to identify the group of cameras to be connected to the Interface Unit. Each group consists of 16 cameras in consecutive order, and the group must always end at an exact multiple of 16. For example, the lowest camera group range is from 1 to 16. The next group range is from 17 to 32, etc., up to the last group (camera range of 9985 to 9999). If multiple Interface Units are used in the same system, each Group ID number must be unique.

The following chart summarizes the supported switch settings:

Switch Setting	Use
001 to 625	Valid switch settings used for Allegiant and biphase controller interfaces
901 to 931	Settings used in Allegiant interface mode to terminate RS-485 data line
000	Reserved; setting is used during firmware upgrades
900	Reserved; setting is used by the factory

When the Interface Unit is connected to an Allegiant system using the Allegiant data interface protocol, the Group ID switches should always be set to correspond to the **physical** camera numbers used in the system. For control systems that use the biphase data interface, the switches should be set to correspond to the controller's **logical** camera configuration.

After a change is made in a large Allegiant system with multiple Interface Units, 30 seconds may be required before the new settings take effect in all Interface Units.

Setting **900** is reserved for factory use. If the Interface Unit is inadvertently set to this value for more than 5 seconds before being set to its correct value, a power off/on may be required for the unit to return to its normal operating mode.

Select the step below that applies to your specific system configuration.

4.4.1 Group ID Settings When Using Allegiant RS-232 or RS-485 Protocol

When using the Allegiant data interface protocol, the Group ID must be set to correspond to a block of 16 **physical** camera numbers between 1-16 and 481-496. Since each block consists of 16 numbers, the Group ID number for these cameras ranges from 1 to 31. Select a Group ID number that does not duplicate another Group ID number.

A special case exists when multiple units are cascaded using the Interface Unit's RS-485 data connection (explained later). The left-most Group ID switch on the last unit must be set to **9**, to terminate the data link.

For example, if a total of 32 Bilinx-enabled cameras will be connected using the range of Allegiant inputs 17-32 and 49-64, one of the Interface Units must be set to Group ID **002**, and the other to **004**. If the Interface Unit for cameras 49-64 is the last unit connected at the end of the RS-485 data link, its actual Group ID should be set to **904**.

If only one Interface Unit will be connected to support Bilinx cameras on inputs 1 to 16, no change is required from the Interface Unit's default setting of **901**.

Set the Group ID switches using the supplied screwdriver, as follows:

Group ID Switches ¹	Camera Number Range	Group ID Switches ¹	Camera Number Range
001	1 to 16	017	257 to 272
002	17 to 32	018	273 to 288
003	33 to 48	019	289 to 304
004	49 to 64	020	305 to 320
005	65 to 80	021	321 to 336
006	81 to 96	022	337 to 352
007	97 to 112	023	353 to 368
008	113 to 128	024	369 to 384
009	129 to 144	025	385 to 400
010	145 to 160	026	401 to 416
011	161 to 176	027	417 to 432
012	177 to 192	028	433 to 448
013	193 to 208	029	449 to 464
014	209 to 224	030	465 to 480
015	225 to 240	031	481 to 496
016	241 to 256		

¹The last unit must be set to terminate the RS-485 data line, by setting the left-most Group ID switch to **9**.

If the Allegiant's camera number assignments will be changed (using the Allegiant Master Control Software package) to use **logical** camera numbers other than the default physical input numbers, Interface Units with Group ID ranging from 1 to 31 are automatically notified of the new settings, by the Allegiant system. This allows the system to support random camera numbers.

NOTE: If the Allegiant's logical camera number assignments are changed as described above, then downloaded into the Allegiant CPU, the update process may take up to 30 seconds. Camera control functions will not be available until this update has completed.

4.4.2 Switch Settings When Interfacing to Biphasic Controller Devices

When using a biphasic data interface, the Group ID switches must be set to correspond to a block of 16 **logical** camera numbers between 1-16 and 9985-9999. Since each block consists of 16 numbers, the Group ID number for these cameras range from 1 to 625. The Group ID number selected must not duplicate Group ID numbers already used.

The Interface Unit is set to **901** by default, and no change is required when only one Interface Unit is used in a system for cameras 1 to 16. Otherwise, use the supplied screwdriver to set the Group ID to correspond to the logical camera number range shown in the table below. For larger systems, refer to *APPENDIX A* for additional Group ID switch settings.

Group ID Switches	Camera Number Range	Group ID Switches	Camera Number Range	Group ID Switches	Camera Number Range
001	1 to 16	023	353 to 368	045	705 to 720
002	17 to 32	024	369 to 384	046	721 to 736
003	33 to 48	025	385 to 400	047	737 to 752
004	49 to 64	026	401 to 416	048	753 to 768
005	65 to 80	027	417 to 432	049	769 to 784
006	81 to 96	028	433 to 448	050	785 to 800
007	97 to 112	029	449 to 464	051	801 to 816
008	113 to 128	030	465 to 480	052	817 to 832
009	129 to 144	031	481 to 496	053	833 to 848
010	145 to 160	032	497 to 512	054	849 to 864
011	161 to 176	033	513 to 528	055	865 to 880
012	177 to 192	034	529 to 544	056	881 to 896
013	193 to 208	035	545 to 560	057	897 to 912
014	209 to 224	036	561 to 576	058	913 to 928
015	225 to 240	037	577 to 592	059	929 to 944
016	241 to 256	038	593 to 608	060	945 to 960
017	257 to 272	039	609 to 624	061	961 to 976
018	273 to 288	040	625 to 640	062	977 to 992
019	289 to 304	041	641 to 656	063	993 to 1008
020	305 to 320	042	657 to 672	064	1009 to 1024
021	321 to 336	043	673 to 688		
022	337 to 352	044	689 to 704		

4.5 Video Connections to the Controller Unit

Video connections from the Interface Unit vary based on the type of video connections available on the controller, and the distance between the controller and the Interface Unit. Review the options in the table below to determine which best suits your configuration, then follow the appropriate section below:

Controller Type	Configuration Method	Max Separation Distance
Allegiant Series LTC 8200, LTC 8300, LTC 8600, LTC 8800, and LTC 8900, DESA ^{XL} DVR Series	Use 16-channel video ribbon cable, supplied with the LTC 8016	2 m (6 ft)
Any controller system using BNC connectors	Use the optional LTC 8508/01 16-channel ribbon-to-BNC video cable	1 m (3 ft)
Any controller system using BNC connectors	Use the 16-channel video ribbon cable supplied with the LTC 8016, to the optional LTC 8807/00 panel, then BNC to user-supplied video link	Distance is limited only by the type of user-supplied video transmission link

Video output signals from the Interface Unit are expecting to see a standard 75Ω termination. Unless a video input will be used to loop out to another device, make sure that the video inputs on the control unit are properly set to provide 75Ω video termination. For details on setting the video terminations of your controller device, refer to the device's installation instructions.

The video connections from the Interface Unit **MUST** be kept in consecutive order, and the group must always end at an exact multiple of 16. For example, the lowest camera group range is from 1 to 16. The next group range is from 17 to 32, and so on, up to the last group, that corresponds to the camera range of 9985 to 9999. Always make video connections to the controller following these guidelines.



Certain controller units support video looping inputs. Do not connect a camera to the looping output of a video channel on the control unit that is already being used by the Interface Unit. Smeared or double video images will result. Alternate video connections available on video control systems should only be used for looping video signals out to some other external control system device or monitor.

4.5.1 Video Connections to Products Supporting Ribbon Cable Interface

Video connections from the Interface Unit to Allegiant models LTC 8200, LTC 8300, LTC 8600, LTC 8800, LTC 8900, and the DESA^{XL} Series Digital Video Recorders use the supplied video ribbon cable. Noting the video ribbon cable connector's orientation and alignment tab, connect one end of the supplied 16-channel ribbon cable to the back of the Interface Unit. Place the other end into the connector on the rear panel of the controller unit that corresponds to the **physical** camera number range previously determined by the Group ID switch settings (described above). For example, if the Group ID switches have been set to **003**, the video ribbon cable should be installed into the Allegiant connector corresponding to video inputs 33 to 48.

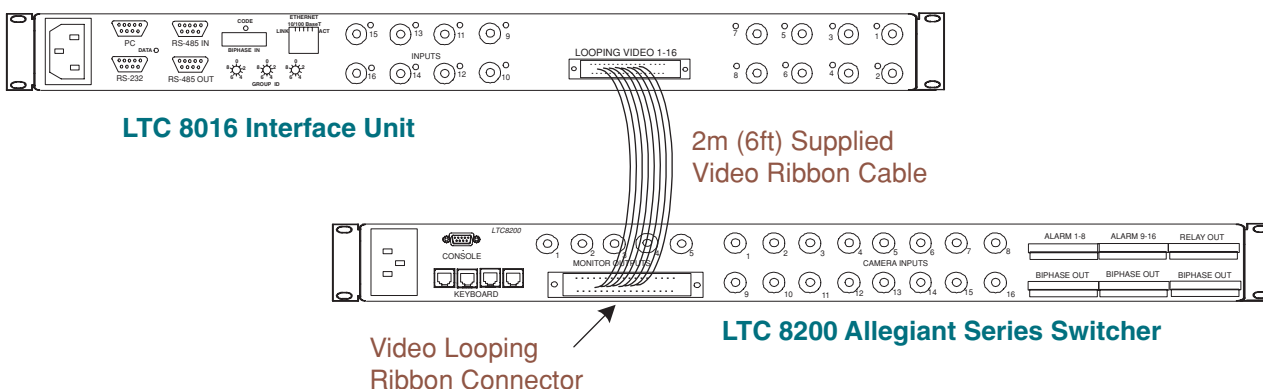


Figure 3 Interface Unit Video Connections to a Typical Allegiant System

4.5.2 Video Connections to Products via LTC 8508/01 Ribbon-to-BNC Cable

Video connections to Allegiant models LTC 8100, LTC 8500, and other products using BNC video connectors, can utilize the 1 m (3 ft) 16-channel LTC 8508/01 Ribbon-to-BNC cable (sold separately). One LTC 8508 cable is required for each Interface Unit being installed. Noting the connector orientation and alignment tab, connect the ribbon connector end of the cable to the Interface Unit. Attach the BNC

ends to the video inputs on the rear panel of the controller that corresponds to the **physical** camera number range previously determined by the Group ID switch settings above. For example, if the Group ID switches have been set to **001**, the BNC ends of the video ribbon cable should be installed in the controller's video inputs 1 to 16. For your convenience, the BNC ends are marked with the video channel number.

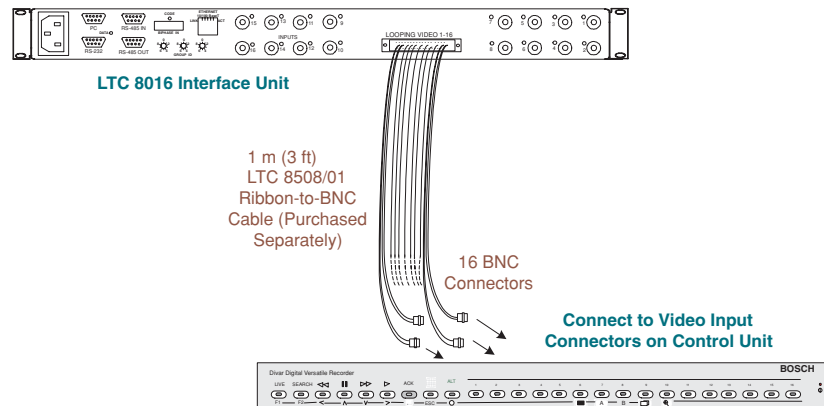


Figure 4 Typical Video Connections to Divar Series DVR Control Units

4.5.3 Video Connections to Products via LTC 8807/00 Video Interconnect Panel

If using a rack-mountable BNC patch panel, or if the Interface Unit will be remoted some distance from the controller unit, an LTC 8807/00 Video Interconnect Panel (sold separately) can be used for video connections to a controller. Each LTC 8807 panel can be used with up to two Interface Units, supporting a maximum of 32 cameras. Connect the supplied video ribbon cable from the Interface Unit into the upper connector on the back of the LTC 8807 for the first block of 16 cameras. The lower connector is only used if a second Interface Unit will be connected, providing a second block of 16 cameras.

User-supplied coax jumper cables are required to complete the video connections between the LTC 8807 panel and the BNC connectors on the controller unit. Attach the coax to the video inputs on the rear panel of the controller bay, that correspond to the **physical** camera number range previously determined by the Group ID switch settings above. For example, if the Group ID switches have been set to **001**, the coax cables should be installed into the controller's video inputs 1 to 16.

If the control unit will be located at a remote distance from the Interface Unit, standard practices for video signal transmission, and the associated data interface, should be used (more details provided in the next section).

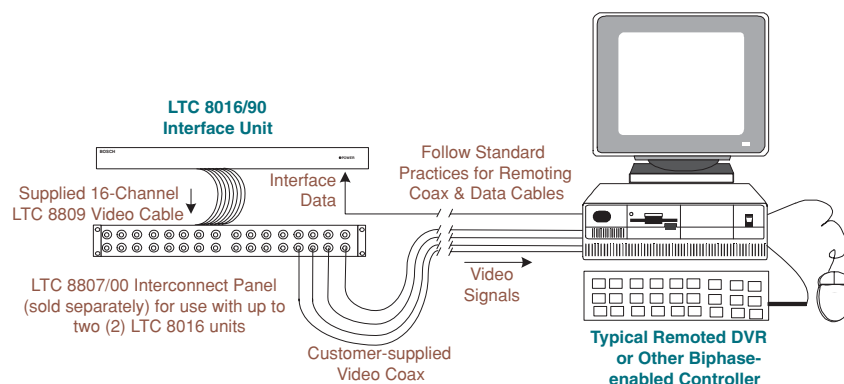


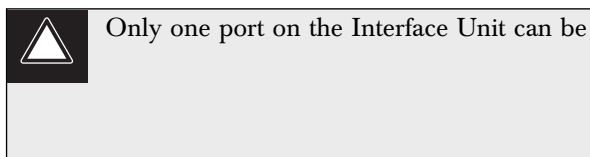
Figure 5 Video Connections to Control System Located at Remote Site

4.6 Allegiant Series Switcher Data Interface

4.6.1 Allegiant Interface Configurations

When using the Allegiant data interface protocol, up to 31 Interface Units can be connected to a single large Allegiant system. In this configuration, bi-directional Bilinx communication to physical cameras ranging from 1 to 496 is supported. In very large systems, additional units can be interfaced to the Allegiant via biphasic data connection.

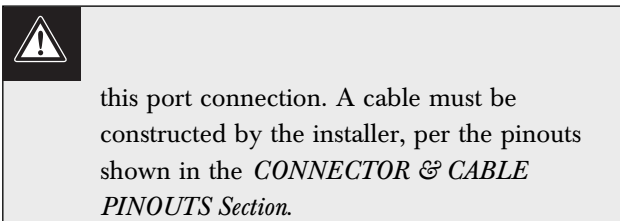
When connecting to an Allegiant system, select a data port on the main Allegiant CPU that will be used to communicate with the Interface Unit. The Interface Unit provides separate interface connectors so it is able to support both RS-232 and RS-485 Allegiant interfaces.



4.6.

Based on the Allegiant model being used, select an available CP is not possible to connect the Interface Unit cable to a Console port provided by an Allegiant L Series P

Allegiant Model	
LTC	
LTC 8200	
LTC 8300	



4.6.1.2 Setting the Allegiant System to Use Bilinx Communication Mode

Using Allegiant Keyboard **User Function 39**, a system keyboard operator with Level 1 Priority must configure the Allegiant to enable the communication interface on the selected port.

IntuiKey Series Keyboard:

From the main Allegiant screen, navigate to the **User Functions** menu screen, then press **[Enter User Command]**. Key in **39**, then press **[Enter]**.

LTC 8555 or LTC 8550 Series Keyboard:

Press **[USER]**, key in **39**, then press **[Enter]**.

The monitor's on-screen text will indicate the current configuration mode, such as **NO DIU OPERATION** (i.e., meaning **No Data Interface Unit Operation**) on a non-configured system. Use the keyboard joystick up/down to navigate through the available port options. Enter the operator password when prompted, and press **[Enter]** to select the port currently shown.

The port is now configured with the proper baud rate and handshake settings to communicate with the Interface Unit.

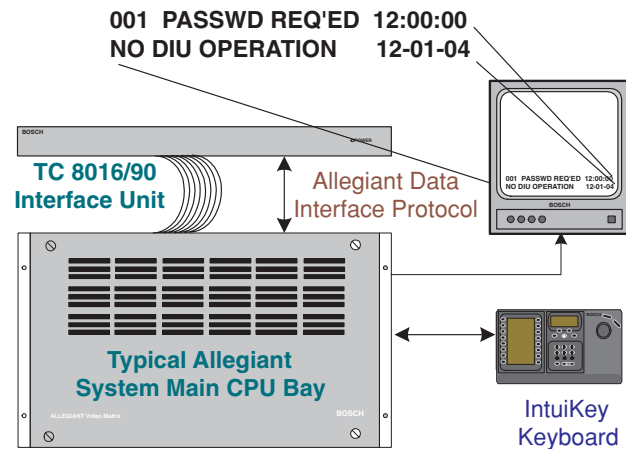
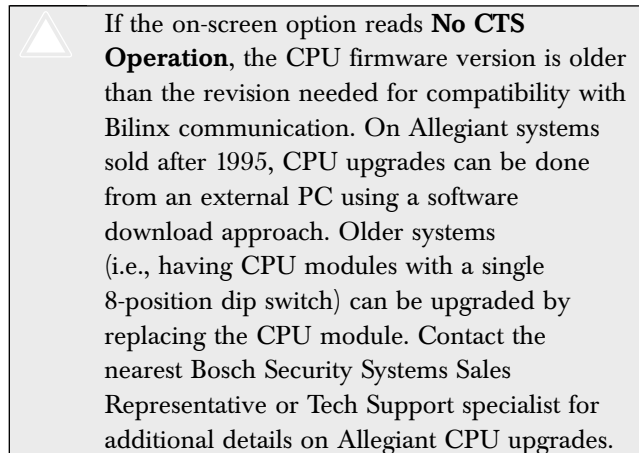


Figure 6 Allegiant On-screen Setup Procedure for Bilinx Operation



A system reset is required to complete the process. Either use **Keyboard User Function 15**, or power off/on the main Allegiant CPU bay. The Allegiant is then ready to communicate with the Interface Unit.

4.6.2 Allegiant Data Connections Using a Single Interface Unit

Use the supplied 3 m (10 ft) data interface cable to connect the Allegiant to the Interface Unit. Connect one end of the cable to the Allegiant port selected in the previous section, and the other end of the cable to the Interface Unit port, according to the following guide:

If an Allegiant CONSOLE, PRINTER, or ALARM port is being used, connect the cable to the **RS-232** connector on the rear of the Interface Unit.

If an Allegiant COM1 or COM2 port is being used, connect the cable to the **RS-485 IN** connector on the rear of the Interface Unit.

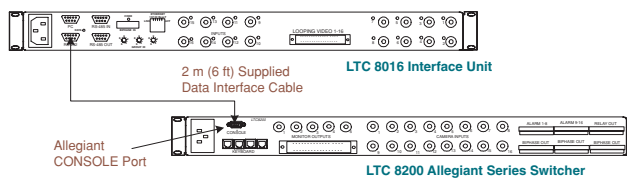


Figure 7 Data Interface Connection Detail When Using Large Model Allegiant System

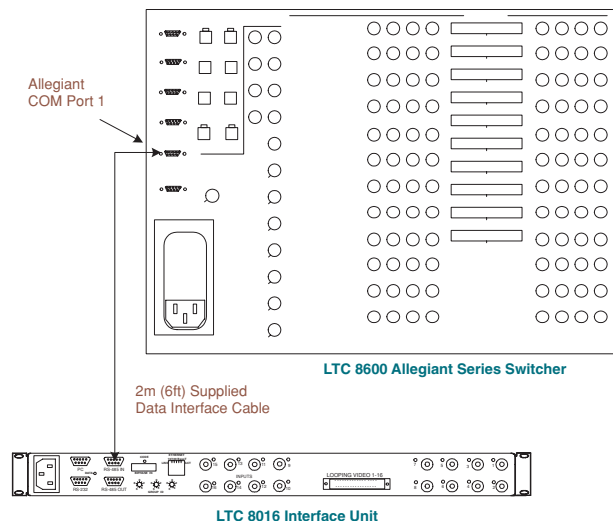


Figure 8 Data Interface Connection Detail When Using Large Model Allegiant System

Once a connection is established between the Interface Unit and the Allegiant, an automatic download of the Allegiant's **physical camera-to-logical camera** table is sent to the Interface Unit. Prior to this update, the front panel LED on the Interface Unit flashes to indicate that it is waiting for the information to be received. Once the LED changes to a steady condition, configuration is complete.

4.6.3 Allegiant Data Connections Using Multiple Interface Units

Up to 31 units can be connected to a single Allegiant switcher, using a **daisychain** data interface configuration. This provides support for up to 496 Bilinx cameras. Since the same data is being sent to all Interface Units in the chain, it does not matter what order is used when connecting the data lines between the units. Simply connect the supplied 3 m (10 ft) data interface cable from the **RS-485 OUT** connector of one Interface Unit to the **RS-485 IN** of the next unit.



To properly terminate the RS-485 data connection, the last Interface Unit in the series (i.e., furthest from the Allegiant switcher) must have its left-most Group ID set to 9.

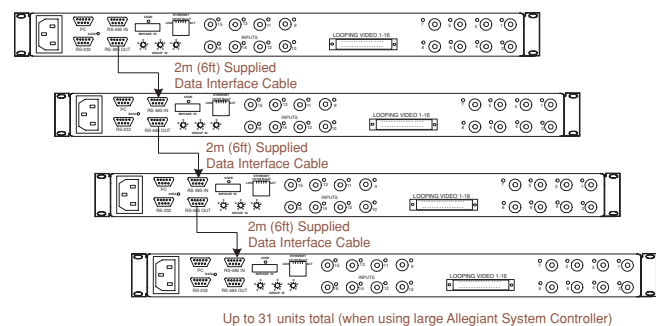


Figure 9 Data Interface Connection Detail When Using Multiple Interface Units

Daisychain configurations can only be used when the data connection from the controller to the Interface Unit utilizes either an **RS-232** or **RS-485** data port. Do not use this method if the data connection from a controller uses the biphasic data port.

4.7 Data Connection to a Biphasic Generating Device

The Interface Unit is designed to support data connections from other head-end controller devices with the ability to generate Bosch Security Systems biphasic control data. Since biphasic protocol is a single direction communication format, control of P/T/Z functions, auxiliaries, and pre-positions are fully supported, but it is not possible to receive any data back from the camera site. This means that reporting of alarms or other camera site-related events is not possible with a biphasic data connection.

To connect the Interface Unit to a biphasic controller, attach the biphasic data cable from the controller to the biphasic input terminal block on the rear panel of the Interface Unit. Use the straight slot end of the supplied offset screwdriver to tighten the terminal block screws. The Interface Unit supports **daisychain** biphasic

connections to simplify connection to multiple Interface Units. If this type of connection is necessary, remove the termination resistor from the biphasic output terminal block, and connect another user-supplied shielded twisted pair cable from the output of one Interface Unit to the input of another.

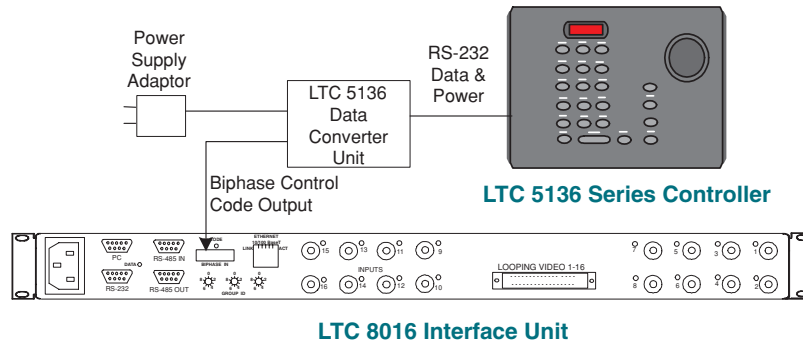


Figure 10 Biphasic Data Interface Connection Detail

4.8 Data Connections Using Biphasic RS-232 Protocol

The Interface Unit can be connected directly to Bosch Security System products that generate biphasic control data in RS-232 format. These products include the PC-based DiBos, and DESA Series Digital Video Recorders.

Typically, the RS-232 interface of the controller first connects to an optional LTC 8786 or LTC 8780 Data Converter accessory unit. The outputs from the Data Converter Unit can be connected to P/T/Z cameras or other devices designed to receive standard biphasic code protocol.

Although the LTC 8016 is capable of receiving standard biphasic protocol, it can also directly accept biphasic in an RS-232 format. Any controller capable

of generating biphasic data in an RS-232 format operating at 9600, 19200, 57600, or 115200 baud, with 8 data bits, no parity, and 1 stop bit, can be connected to the Interface Unit.

When RS-232 communication is first established, the Interface Unit may require 3 to 5 seconds to automatically detect and adjust to the controller's baud rate. No control of cameras is possible until this process is completed.

Refer to the portion of the next section that is applicable to your configuration, based on the controller product being connected to the Interface Unit.

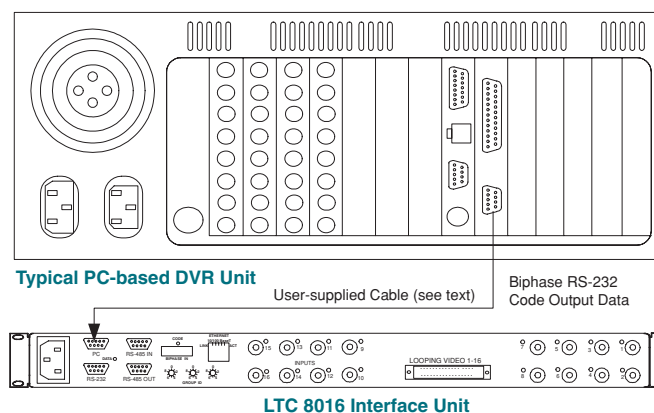


Figure 11 Biphasic RS-232 Data Interface Connection Detail

4.8.1 Connecting to DiBos Digital Video Recorders

A RS-232 grade data cable (not supplied) is required to connect the DiBos DVR to the LTC 8016 Interface Unit. A Bosch Security System's S1385 cable can be purchased separately, or one can be constructed based on the pinouts in the *CONNECTOR AND CABLE PINOUTS* Section.

Connect one end of the RS-232 data cable to an available COM port on the DiBos, and the other end of the cable to the PC port on the Interface Unit. The DiBos software must now be configured to send the biphasic PTZ commands out the COM port. For details on this configuration option, refer to the appropriate section in the DiBos instruction manual.

4.8.2 Connecting to DESA and DESA-8 Series Digital Video Recorders

A RS-232 grade data cable (not supplied) is required to connect the DESA DVR to the LTC 8016 Interface Unit. A Bosch Security System's S1385 cable can be purchased separately, or one can be constructed based on the pinouts in the *CONNECTOR AND CABLE PINOUTS* Section.

Connect one end of the RS-232 data cable to the COM2 port on the DESA, and the other end of the cable to the PC port on the Interface Unit. The DESA software must now be configured to send the biphasic PTZ commands out of its COM2 port (rather than the default COM1 port). For details on this configuration option, refer to the appropriate section in the DESA instruction manual.

4.8.3 Connecting to DESA^{XL} Series Digital Video Recorders

A user-supplied RS-232 grade data cable is required to connect the DESA^{XL} DVR to the LTC 8016 Interface Unit. The interface cable must either be purchased locally, or constructed based on the pinouts in the *CONNECTOR AND CABLE PINOUTS* Section.

Connect one end of the RS-232 data cable to the end of the Watchdog/PTZ cable connected to the DESA's COM1 port, and the other end of the cable to the PC port on the Interface Unit.

5.0 TYPICAL CONFIGURATION DIAGRAMS

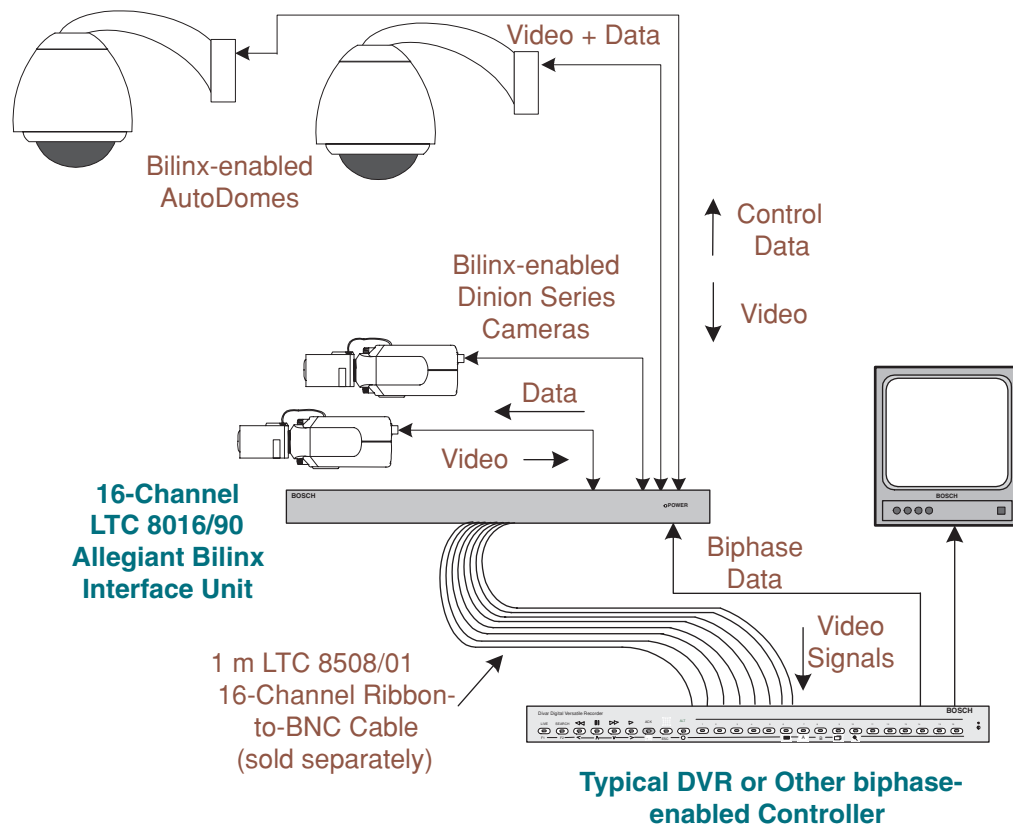


Figure 12 Typical Interface Unit Connected to DVR Control Unit

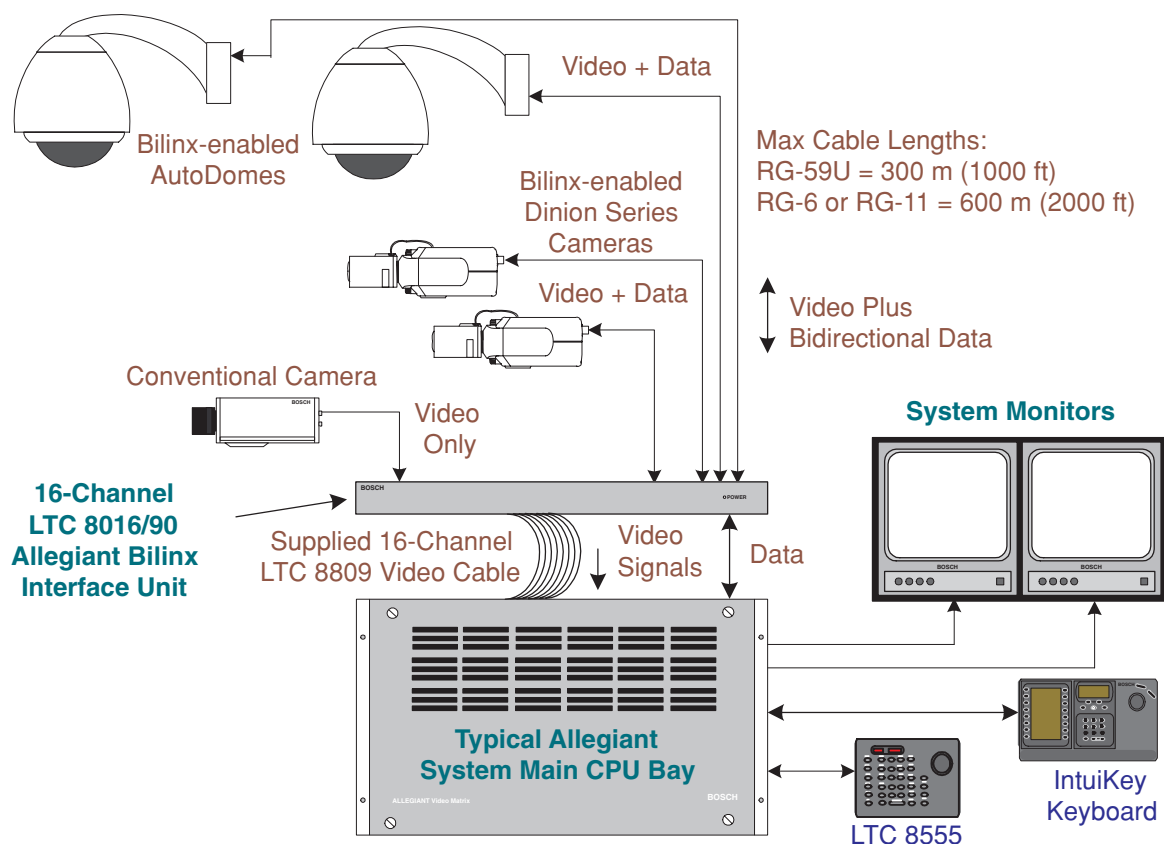


Figure 13 Typical Interface Unit Connected to Allegiant Switching System

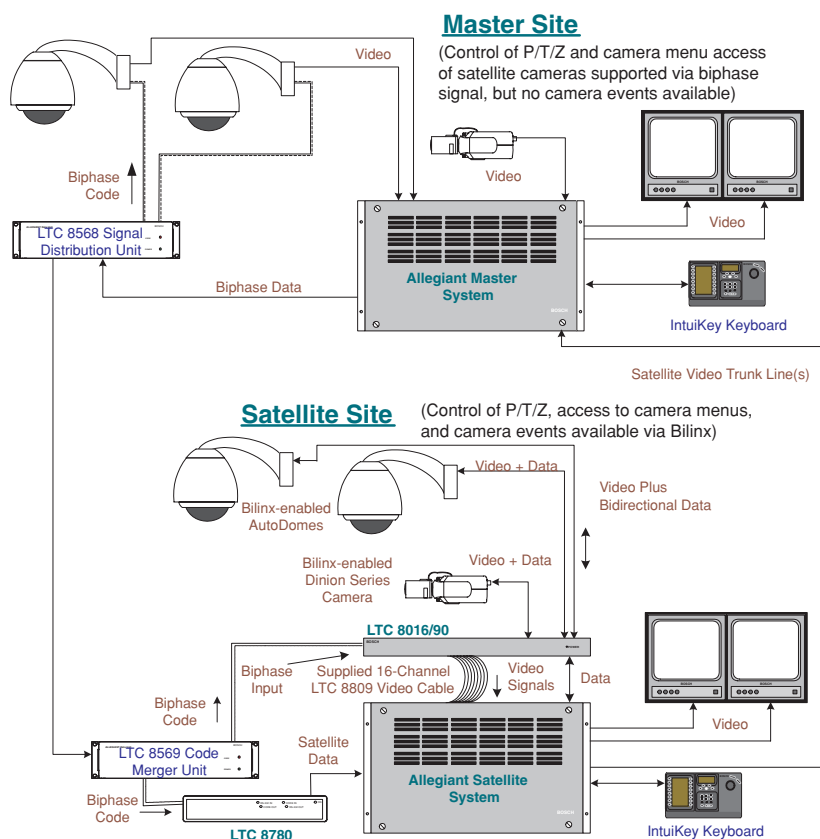


Figure 14 Interface Unit Used in Allegiant Satellite System Configuration

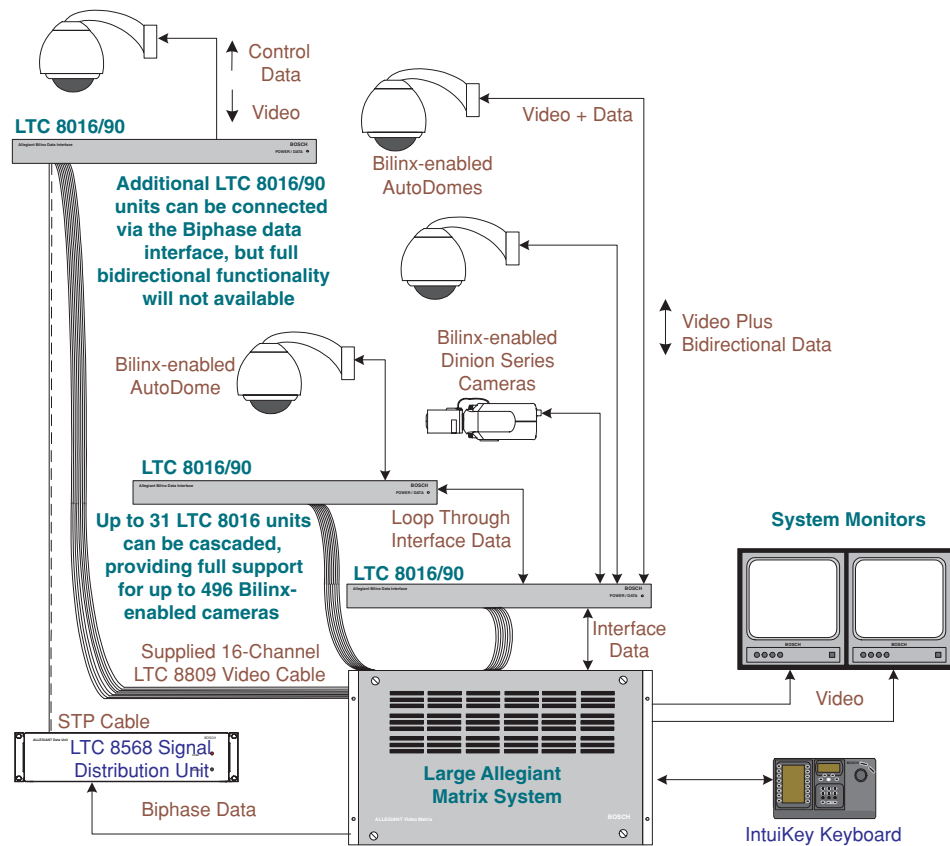


Figure 15 Large Allegiant System with Several Interface Units

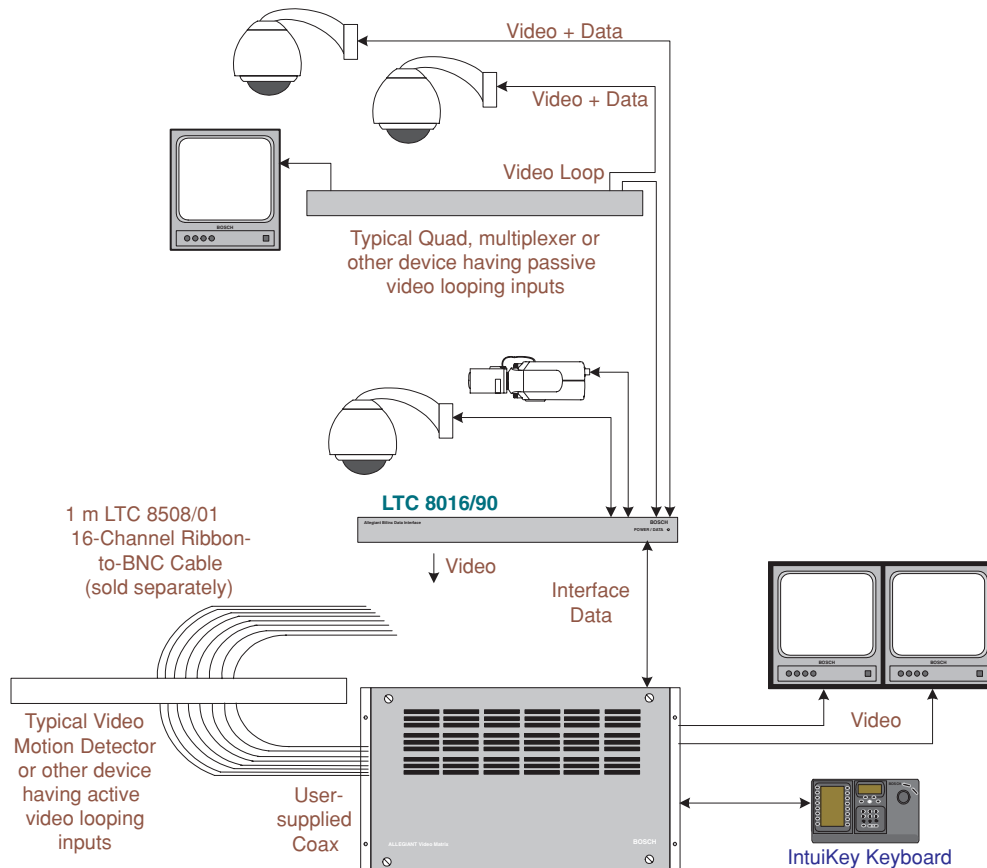


Figure 16 Recommended Configuration When Using Bilinx with Other Devices

6.0 OPERATION

Once installation is finished, operation of this unit is completely automatic. Refer to the applicable section of the manual supplied with the control device and/or camera for details regarding their features/functions.

The Interface Unit is designed to process camera contact alarm and motion event messages from cameras that support this functionality. The Interface Unit can also detect **Dark Alarm** signal conditions when the

video amplitude level drops below 15 IRE. When the Interface is connected to an Allegiant system using the Allegiant data interface, messages can be sent to the controller to notify the system of these events. By default, camera contact alarm input 1 will result in a standard Allegiant system alarm response, assuming an alarm response mode has been configured in the system. System responses to camera alarms 2 to 4, and the **Dark Alarm** require programming of the Allegiant system using the PC-based Allegiant LTC 8059 Master Control Software, version 2.7 or later.

7.0 DEVICE OUTLINE



Figure 17 Front Panel

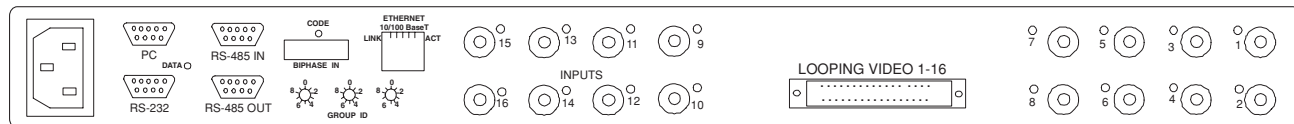


Figure 18 Rear Panel

8.0 CONNECTOR AND CABLE PINOUTS

8.1 LTC 8016 Connector Pinouts

6-Position CODE Connector ¹	
Pin	Connection
1	Shield
2	Biphase Data --
3	Biphase Data +
4	Shield
5	Biphase Data --
6	Biphase Data +

¹Pins are not numbered; the numbers represent the pin sequence from left to right.

9-Pin PC Connector		
Pin	Connection	Old Pinouts ²
1	--	--
2	Rx	Tx
3	Tx	Rx
4	--	--
5	Data Gnd	Data Gnd
6	--	--
7	RTS	CTS
8	CTS	RTS
9	--	--

²Pinouts used on units manufactured before July, 2004 (date code 0426).

9-Pin RS-232 Connector	
Pin	Connection
1	Data Gnd
2	RTS
3	CTS
4	Tx
5	Rx
6	--
7	Data Gnd
8	--
9	--

9-Pin RS-485 IN Connectors	
Pin	Connection
1	--
2	TXD+
3	TXD--
4	RXD+
5	RXD--
6	--
7	--
8	--
9	--

9-Pin RS-485 OUT Connectors	
Pin	Connection
1	--
2	RXD+
3	RXD--
4	TXD+
5	TXD--
6	--
7	--
8	--
9	--

8.2 Supplied Serial Data Cable Pinouts

9-Pin Male	9-Pin Male
1	--
2	4
3	5
4	2
5	3
6	--
7	--
8	--
9	--

8.3 Miscellaneous Cables (Not supplied)

Bosch S1385 or Industry standard Null modem RS-232 Data Cable (Required if connecting the LTC 8016 directly to the COM port on PC)

9-Pin Female (PC COM Port)	9-Pin Female ¹ (LTC 8016 PC)
1,6	4
2	3
3	2
4	1,6
5	5
7	8
8	7
9	--

¹The PC connector on units manufactured before July, 2004 (date code 0426) used a male 9-pin connector for this port.

Industry type straight through RS-232 Data Cable (Required if connecting the LTC 8016 to a Watchdog/PTZ connector on the DESA^{XL} DVR)

9-Pin Male (DVR COM Port)	9-Pin Female ² (LTC 8016 PC Port)
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

²The PC connector on units manufactured before July, 2004 (date code 0426) used a male 9-pin connector for this port.

9-Pin to 9-Pin Serial Data Cable for Allegiant Alarm Port (Required if connecting the LTC 8016 to the Allegiant Alarm Port)

9-Pin Male (Alarm Port)	9-Pin Male (LTC 8016 RS-232 Port)
1 RTS	3 CTS
2 Tx	5 Rx
3 Chassis Gnd	--
4 Data Gnd	1 Data Gnd
5 Data Gnd	7 Data Gnd
6 Rx	4 Tx
7 CTS	2 RTS
8 No Connection	--
9 No Connection	--

9.0 MAINTENANCE

The Allegiant Bilinx Data Interface Unit does not require any special maintenance.

10.0 TROUBLESHOOTING

Problem	Possible Cause and Solution
Complete lack of operation after installation	a) Three to five seconds after being powered up, if no LEDs (on front and rear panel) indicate activity, verify that the AC power cord is connected, and the AC power source is energized. b) If some of the LEDs are active, refer to the <i>LED INDICATORS</i> Section below for additional information. c) The Interface Unit has been inadvertently set to Group ID 900 for more than 5 seconds. Set the Group ID to the correct setting and power off/on the Interface Unit to return it to its normal operating mode.
No PTZ or menu access is possible on Bilinx-enabled camera	a) If the Channel LED does not indicate Bilinx communication, verify that the camera is designed to support Bilinx communication. Refer to the <i>COMPATIBILITY INFORMATION</i> Section. The Video Input Channel LEDs can indicate whether the LTC 8016 is using Bilinx communication. Refer to the <i>LED INDICATORS</i> Section below for additional information. b) Verify that the Interface Unit is connected to the correct block of system video inputs based on the Group ID switch settings. c) The camera is located at a distance that exceeds Bilinx communication limits. Refer to the <i>CAMERA VIDEO CONNECTIONS</i> Section for maximum distance details. d) Up to 20 seconds may be required when a Bilinx-enabled camera is first connected to the Interface Unit before control is possible. No response before this time has elapsed should be considered normal.
No video on control unit	a) The Video interface cable from Interface Unit is not connected to the correct input of the control unit. b) The Interface Unit has not been connected to an AC power source.
Erratic or no control of cameras when multiple Interface Units are in use	Verify that each Interface Unit is set to a unique Group ID number.
Smeared or double video images are present on controller output	Verify that a camera signal has not been connected to the looping output of a video channel on the control unit that's already in use by the Interface Unit.

11.0 LED INDICATORS

The Allegiant Bilinx Data Interface Unit incorporates several LEDs that indicate various status conditions. These LEDs are helpful when troubleshooting a problem.

LED	Description
<u>Behavior</u> ON steady	<u>Condition</u> The Interface Unit is operating normally, and has received the Allegiant's logical-to-physical camera table
FLASHING at 50% duty cycle	The Interface Unit is operating normally, but has not received the Allegiant's logical-to-physical camera table
FLASHING randomly	The Interface Unit is operating normally, and the LED is following the action of biphasic data being received
Video Input Channel Indicators	The Channel LEDs indicate the status of the video input signal. A Channel LED behaves according to the following table:
<u>Behavior</u> ON with occasional flash	<u>Condition</u> Indicates connection to a Bilinx-enabled camera
ON with rapid flashing	Indicates control of a Bilinx-enabled camera
OFF with rapid flashing	Indicates control of a Bilinx-enabled camera, but the video level is below acceptable limits, indicating a <i>Dark Alarm</i> condition
ON	Indication when connected to a non-Bilinx-enabled camera having an acceptable video level
OFF with flashing at 50% duty cycle	No video is present from a non-Bilinx-enabled camera, indicating a <i>Dark Alarm</i> condition
LINK LED	When illuminated, indicates that a valid physical connection exists between the Interface Unit and the RS-232 port of a controller unit.
DATA LED	Flashes to indicate that the Interface Unit is receiving valid data from a controller unit during serial communications.
CODE LED	Flashes to indicate that the Interface Unit is receiving biphasic data from a controller unit.
Ethernet port LINK & ACT LEDs	Not used in current implementation (reserved for future use).

12.0 REPLACEMENT PARTS

Description	Part Number
16-Channel Video Ribbon Cable	LTC 8809/00
3 m (10 ft) Data Interface Cable	303-2173-504
Replacement AC Line Cord, 120 VAC	Source from local supplier
Replacement AC Line Cord, 220-240 VAC	Source from local supplier
6-Position Terminal Block with 100Ω Terminating Resistor	303-4118-506
Offset Screwdriver	303-4411-001

13.0 COMMON ACCESSORY PARTS

Description	Part Number
1 m (3 ft) 16-Channel Video Ribbon-to-BNC Cable	LTC 8508/01
32-Channel Video Interconnect Panel	LTC 8807/00
Industry Standard Null Modem RS-232 Cable	S1385

Bosch Security Systems, Inc.
850 Greenfield Road
Lancaster, PA 17601 USA
Tel: 800-326-3270
Fax: 1-717-735-6560
www.boschsecurity.com

Bosch Security Systems B.V.
P.O. Box 80002
5600 JB Eindhoven
The Netherlands
Tele +31 40 27 87113

Bosch Security Systems Pte Ltd.
38C Jalan Pemimpin
Singapore 577180
Republic of Singapore
Tel: 65 (6) 319 3486

© 2005 Bosch Security Systems GmbH

F01U011012_01 05-33 | Updated August 18, 2005 | Data subject to change without notice.

Windows is a registered trademark of Microsoft Corporation.

Bilinx, Allegiant, AutoDome, and Dinion are registered by Bosch Security Systems, Inc. in the US patent trademark office.

BOSCH