



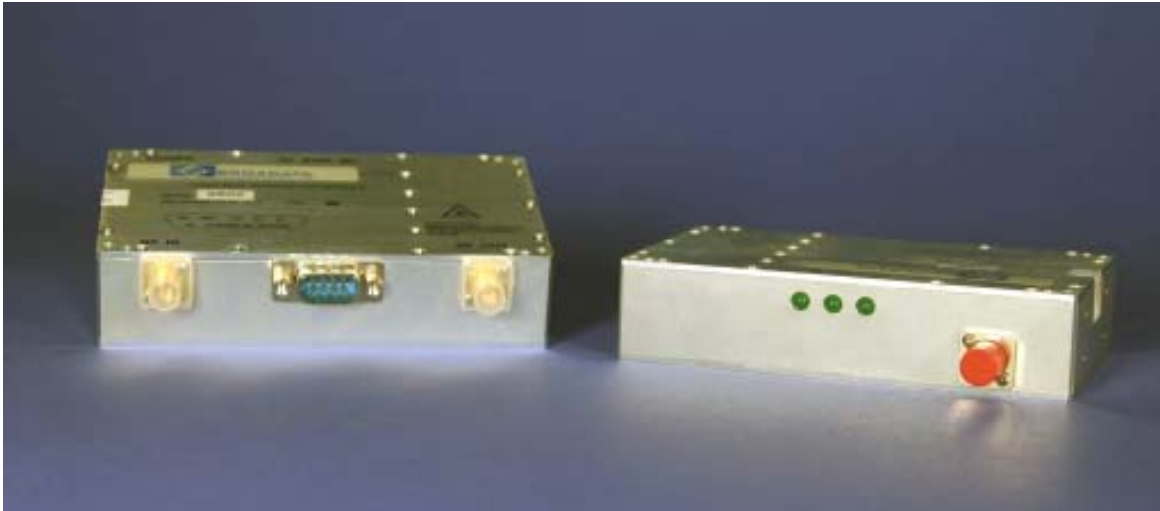
# 720

**RF Wireless Fiber Optic Transmission Systems**

**RF + RS-232**



**CDMA/GSM (800-960 MHz)  
PCS/UMTS (1700-2200 MHz)  
Broadband (800-2200 MHz)**



### **Applications**

Optical Repeater for CDMA/GSM, PCS/  
UMTS or Broadband RF Wireless

The BCI Model 720 is a low noise, radio frequency fiber optic transceiver. The product is designed for fiber optic RF and RS-232 data transmission over a single optical fiber. The optics offer high linearity and superior performance over a wide range of operating temperatures. Operation over a single fiber is enabled through the incorporation of a wavelength division multiplexer at 1550 and 1310 nanometers.

### **Features**

Bi-directional Operation Over 1 Fiber

DFB Laser with Isolator

-20° C +75° C Operating Temperature

RS-232 Data Modem @ 19,200 baud

The product supports optimal operation for 800-960 MHz CDMA/GSM (721 Series), 1700-2200 MHz PCS/UMTS (722 Series), and 800-2200 MHz Broadband (723 Series) wireless applications. The optical transmitter utilizes high performance DFB lasers operating at 1550 and 1310 nanometers. The receivers are based upon low distortion PIN diode photodetectors.

RF connections utilize standard SMA connectors and the optical connection is through standard FC/APC connectors.





## RF Wireless Fiber Optic Transmission Systems

Parameter	Value			Unit	Remark
	Min	Typ	Max		
Optical Wavelength	1290 1540	1310 1550	1330 1560	nm nm	
Optical Output Power - 1310	3	4		dBm	
Optical Output Power - 1550	3	4		dBm	
RF Gain	-1.5	0	+1.5	dB	950-2100 MHz
CTB - 1310			-60	dBc	
CTB - 1550			-60	dBc	
RF Input Power		0	+10	dBm	
Response Flatness (CDMA/GSM)	-0.5	0	+0.5	dB	825-835 MHz 870-880 MHz 800-960 MHz
(PCS/UMTS)	-1.5 -0.5	0	+1.5 +0.5	dB	1800-2000 MHz
(Broadband)	-1.5 -2		+1.5 +2	dB dBm	1700-2200 MHz 800-2200 MHz
RF Directivity - 1310	60			dBc	
RF Directivity - 1550	60			dBc	
Output Noise Floor - 1310	-133	-135		dBm/Hz	
Output Noise Floor - 1550	-133	-135		dBm/Hz	
RS-232 Capability			19200	bps	
VSWR			1.4		50Ω
Supply Voltage		12		V	
Current Consumption			500	mA	
Operating Temperature	-20	+25	+75	°C	
Storage Temperature	-40	+25	+85	°C	
Optical Connector		FC/APC			
RF Connector		SMA Female			

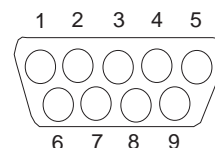
\*Test condition: 872MHz and 874MHz dual frequency 0dBm input, 1310 module connect with 1550, 0 dBm loss. FSK Modem Data Rate test with 35km fiber.

### \*Pin Description

No.	Name	Note
2	GND	
3	Vcc	Positive power supply, +12VDC
4	TXD	RS-232 output
5	RXD	RS-232 input
7	LD Alarm	TTL output, Low voltage for alarm
9	PD Alarm	TTL output, Low voltage for alarm
1, 6, 8	No connect	

### \*LED Description

Rx	LD_AL (Normal ON)
PWR	POWER_AL (Normal ON)
Tx	PD_AL (Normal ON)



DOING MORE WITH ONE FIBER *plus*

Subject to continued product enhancement, we reserve the right to change the above specifications and description without notice.

