

Down Converter Barrel Gain Selectable

COFDM – Video, Audio Telemetry and IP Products

COBHAM

June 2011 Data Sheet

The most important thing we build is trust

Cobham Down Converters

All Cobham receivers operating at frequencies above 850MHz require a down converter. Cobham Barrel down converters sit in line between the antenna and the receiver, and draw power remotely from the receiver. Down converters are supplied in selectable high/low gain or fixed high and low gain variants and this dictates how much cable they can drive (typically 10-15m for the low gain and 50-100m for high gain. For precise cable run length calculations contact Cobham. Cobham down converters offer excellent low noise performance, and are designed for permanent outdoor deployment, a variety of mounting kits are available. A separate data sheet is available on request for those users requiring detailed information regarding, noise performance, gain or LO frequencies.

Down Converter Barrel

The Cobham standard barrel down-converter is designed for permanent outdoor installations on the base of the receive antenna. The down-converter will successfully drive 10m of cable with down-converted UHF signal with no loss of performance.

Product Code:

DCB-550600	Weight 0.2Kg, Size 85mm x 45mm Dia
DCB-450500	Weight 0.2Kg, Size 85mm x 45mm Dia
DCB-300350	Weight 0.2Kg, Size 85mm x 45mm Dia
DCB-250300	Weight 0.2Kg, Size 85mm x 45mm Dia
DCB-200250	Weight 0.2Kg, Size 85mm x 45mm Dia



Down Converter Barrel High Gain

The Cobham fixed non selectable high gain barrel down-converter is designed for permanent outdoor installations on the base of the receive antenna. The down-converter will successfully drive 50-100m of cable with down-converted UHF signal with no loss of performance. If switchable performance is required please refer to the DCBGS below.

Product Code:

DCBX-200250	Weight 0.2Kg, Size 85mm x 45mm Dia
DCBX-100150	Weight 0.2Kg, Size 85mm x 45mm Dia



Down Converter Barrel Gain Selectable

The Cobham selectable barrel down converter has optimum performance in all situations. It is easy to mount with magnetic, cable-tie and screw-hole fixings for maximum flexibility. This down converter has excellent adjacent channel rejection capabilities. LED indicator for power on/off and gain high/low. Powered from receiver via co-axial cable (BNC/TNC). It connects to receiver via standard 75Ω cable. Available in two variants; N Type to BNC (Broadcast) and TNC to TNC (Surveillance).



* Full specification and product codes below



Down Converter Barrel Gain Selectable

COFDM – Video, Audio Telemetry and IP Products
October 2011 Data Sheet



Specification:

Input

RF Input from Antenna 50 Ohm N Type to BNC, or TNC to TNC

Output

UHF Output to Receiver 75 Ohm (250~850MHz) BNC/TNC

RF

Frequency Bands 1.67 to 5.00GHz
Max. RF Input Power 35mW (+15dBm) No damage.
Max. RF Input Power(P1dB) 100uW (-10dBm) Normal operation.

Noise Figure (applies to both)

DCBGS-167203 3.5dB
DCBGS-203255 3.5dB
DCGBS-440500 TBD

Gain

Gain selectable Typ. 10dB Low gain, 20dB High gain

RF LO

DCBGS-167203 2350MHz, High side LO
DCBGS-203255 1720MHz, Low side LO
DCBGS-440500 TBD, TBD

Physical

Dimension 105 mm, 48 mm
Weight Base Unit 225g

Power

DC Power Input DC from Receiver 6V nominal. 14.5V Max.
Power Consumption 2.2 to 3W depending on gain mode

Controls/Indicators

Gain Switch (Std/High) Rotary 4 position switching mechanism in base
1. Std Gain, LED OFF
2. Std Gain LED ON
3. High Gain LED OFF
4. High Gain LED ON
Standard Gain Indication Green LED in base
High Gain Indication Red LED in base

Cable Loss (between Down-converter and Receiver)

Standard setting up to 4dB
High setting up to 14dB

Environment

Temperature Range -10 to +50 deg C

Cable Lengths (between Down-converter and Receiver)

The maximum length of cable depends on the RX frequency, as this dictates the down-converted UHF frequency which the cable has to carry. The theoretical cable lengths in the chart below show best and worst case, dependant on the frequency used:

Cable	Max Distance (typical)
RG59	48-82m
RG6	82-133m
LMR400-75	127-233m
LDF4-75	227-387m

Product Code:

Down converter Barrel Gain Selectable (TNC to TNC)

DCBGS-167203 Down Converter Barrel Gain Selectable 1.670-2.025GHz
DCBGS-203255 Down Converter Barrel Gain Selectable 2.025-2.550GHz
DCBGS-440500 Down Converter Barrel Gain Selectable 4.40 - 5.00GHz

Down converter Barrel Gain Selectable Broadcast (N Type to BNC)

DCBGSB-167203 Down Converter Barrel Gain Selectable 1.670-2.025GHz
DCBGSB-203255 Down Converter Barrel Gain Selectable 2.025-2.550GHz
DCBGSB-440500 Down Converter Barrel Gain Selectable 4.40 - 5.00GHz

Other Bands are available –Please contact Cobham for more information.

Accessory Options

BARRF1 Low Loss Cable 1m
CABRF3 Low Loss Cable 3m
CABRF10 Low Loss Cable 10m
CABRFBNC10 Low Loss Cable BNC 10m

For further information please contact:

Cobham Tactical Communications and Surveillance

The Cobham Centre – Solent, Fusion 2
1100 Parkway
Solent Business Park
Whiteley
Hampshire, PO15 7AB
England

T: +44 (0)1489 566 750
F: +44 (0)1489 880 538
css.sales@cobham.com

Products are available to security users only, in licensed frequency bands. These products are not approved for use by unlicensed users.

Commercial products are available to unlicensed users - contact Cobham Tactical Communications and Surveillance direct for details.

All product specifications are subject to change without notice. Cobham Tactical Communications and Surveillance will not be liable for technical or editorial errors or omissions.

