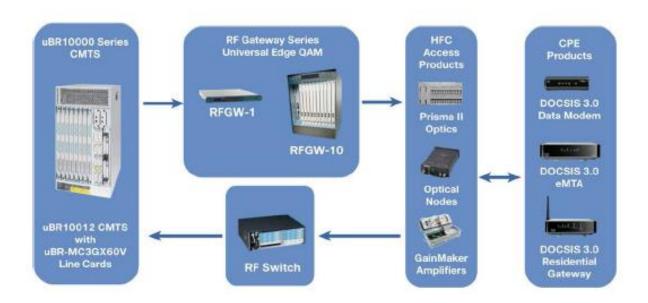# CISCO   uBR MC3GX60V

BROADBAND PROCESSING ENGINE WITH FULL DOCSIS 3.0 SUPPORT

The Cisco uBR MC3GX60V Broadband Processing Engine (BPE) is a high capacity, DOCSIS 3.0 capable line card for the Cisco uBR 10012 Universal Broadband Router. With 72 DOCSIS downstream and 60 upstream channels per card the Cisco uBR10012 platform scales to an unprecedented 576 modular DOCSIS downstream channels and 480 upstream channels, or approximately 24 Gbps of downstream throughput and 14.4 Gbps of upstream throughput, in a single, carrier class chassis. Because it bonds 18 EuroDOCSIS channels per bonding group, the solution allows cable operators to deliver ultra broadband services with maximum downstream speeds approaching 1.0 Gbps per subscriber.

- DOCSIS line rate operation for all downstream channels (72 at 256QAM Annex B or 54 at 256QAM Annex A) and all 60 upstream channels (up to 64QAM at 6.4 MHz) in bonded and nonbonded modes
- From four channel to more than 32 channel downstream bonding capable; four channel upstream bonding capable
- Six Small Form Factor Pluggable (SFP) ports (three active and three standby)
- 20 upstream ports (identical to MC20X20V), providing up to 12 frequency stacking per port
- Flexibility in assigning upstream channels to upstream ports; upstream frequency of up to 85 MHz
- Full DOCSIS 3.0 CMTS and downstream external PHY interface (DEPI) capability
- Superior RF performance with enhanced full feature tap (FFT), ingress cancellation, and impulse noise detection capability
- Time Division Multiple Access (TDMA), Advanced Time Division Multiple Access (A-TDMA), and Synchronous Code Division Multiple Access (S-CDMA) supported

PHYSICAL
Occupies a single Slot in the Cisco uBR10012 Chassis Interface: Line Card single Mode with intermediate Reach Connector Hot swappable; no slot Dependency Weight: 11.6 lb (5.26 kg) Dimensions (H x W x D): 21.5 x 1.38 x 17 in. (54.61 x 3.51 x 43.18 cm)

POWER
Max rated Power: 246W

RELIABILITY AND AVAILABILITY
Designed for five 9s of availability (99.999%)

ENVIRONMENTAL
Operating Altitude: –197-13,123 ft (-60-4000 m) Storage Temperature: –4-149°F (-20-65°C) Operating Temperature, nominal: 41-104°F (5-4 0°C) Storage relative Humidity: 5-95% Operating relative Humidity: 10-90% Maximum Heat Dissipation: 190W, or 648 BTU/hr

SOFTWARE RELEASE
Cisco IOS® Software Release 12.2(33)SCE or later

SUPPORTED SFP
SFP-GE-T (1000BASE-T) GLC-SX-MM (1000BASE-SX) GLC-LH-SM (1000BASE-LX/LH) GLC-ZX-SM (1000BASE-ZX)