

## Falcon Device

### Single VDSL DMT Chip “MT2201”

#### General Description

The MT2201 is part of the Metanoia VDSL chipset solution named Falcon. The Falcon is a single chip programmable Discrete Multi-Tone (DMT) Digital Subscriber Loop (DSL) digital modulator/ demodulator processor units for broadband access. The Device supports all committee T1E1.4 and ITU-T SG15Q4 DSL discrete multi-tone based specifications, as well as IEEE 802.3 10PASS-TS.

#### Key Features

- ◆ Single chip configurable DMT data pump supporting one 100Mbps/50Mbps DS/US
- ◆ Up to 2048 DMT carriers downstream, Up to 2048 DMT carriers upstream
- ◆ Total DMT carriers U/D can utilize all 4096, Four DMT passbands in each direction
- ◆ Conformance to T1E1, ITU-T standards for VDSL, and current IEEE 802.3ah draft for 10PASS-TS (EFM)
- ◆ Configurable bandplan, conforms to NA, EUR and Swedish Bandplans subject to the 2048/3072 and 8-band/4-passband constraints
- ◆ Trellis coding support for up to 1024 DMT bins in any mode supporting VDSL
- ◆ Two or Four subscriber channels may be bonded into one logical channel
- ◆ Simultaneous fast and slow path operation (dual latency) on any channel
- ◆ Programmable Upstream Bandsplit DMT VDSL
- ◆ Support for 4 DMT DSL Analog Front Ends
- ◆ ATM Forum UTOPIA-2 - 4 PHY channels
- ◆ IEEE 802.3 MAC MII/SMII support for one, two or four Media Access Controllers
- ◆ Internal RAM for software stored in external flash or managed through MAC interface
- ◆ PHY software and management through IEEE 802.3 MDIO serial or a bi-directional octal interface
- ◆ Optimized to support low latency applications as required for voice
- ◆ 4 KHz and 8 KHz symbol rates allow variable bandwidth per bin
- ◆ VDSL rate over 100 Mbps on short loop with possible reach of 3,000 meters DS
- ◆ 128-lead and 208-lead thin quad flat package (LQFP)

#### Applications

- ◆ IP digital Subscriber Loop Access Multiplexer solution
- ◆ Multi-Service Access Platforms (MSAP)
- ◆ Customer Premise/Located Equipment for Internet Access and VoIP

