SkyMesh™ series smart router terminals feature multiple-channels in a single box to provide Packet Switching Multiple Access (PSMA) with on-demand connections for star, mesh, and multi-star networks. SkySwitch® Network structure is user programmable that supports multiple topologies within a single network. Network topology can be changed on the fly to meet rapid changing mission requirements in emergency. SkyMesh™ smart terminals deliver all user traffic via single-hop link to their final destinations.

SkyMesh™ 2100 & 4100 smart terminals offer high performance, ease of use, fast acquisition, IP routing, wide range of data rates from 8 Kbps to 13.8 Mbps using a single carrier per site. Most importantly, its near 100% channel efficiency is the highest among competition without multiplexing overhead for multiple channels communications. The low latency performance results faster carrier acquisition for shorter response time in real-time applications. For lower cost and better performance, the SkySwitch® is a better alternative to connection-oriented mesh TDMA terminals. These advantages minimize OpEx of SkySwitch® VSAT network.

When the terminal operates in Network Mode, it functions as a multi-channel smart IP data router in a mesh network. When the terminal operates in Standalone Mode, it functions as a high performance and high rate, pre-assigned SCPC/MCPC digital modem with embedded IP router.
Using SkyMesh™ smart terminals in Standalone Mode can provide pre-assigned mesh connections among SkyMesh™ remotes. Application in MCPC mesh connectivity is particularly suitable for voice and multicasting video connections. Users of standalone SkyMesh™ smart terminals have the option to upgrade the fixed connections to an intelligent packet switching network with on-demand PSMA and BOD (Bandwidth on Demand), by adding SkySwitch® NMCS (Network Management and Control Subsystem).

When used in Networking Mode, SkyMesh™ smart terminals feature high performance two-way simultaneous links to multiple sites from network hub or remote control site at corporate user headquarters. The ability to connect to two or more central sites allows traffic being transmitted from corporate branches to headquarters directly while bypassing hub. The smart terminal validates connectivity and does traffic filtering. SkySwitch® smart terminal carrier is sized to support the traffic of a single site and not shared. Comparing with TDMA carrier, SkySwitch’s smaller carrier uses smaller antenna and ODU.

When used in **DVB-SCPC Mode**, SkyMesh™ provides highly efficient SCPC/MCPC return channel for mesh connection in addition to broadband access. The combined benefit of DVB-S2 with SkySwitch® MCPC return channel results the lowest possible operating cost for broadband network operator.

### SkyMesh™ 2/4100 Terminal Specifications

#### Service Applications
- High performance, broadband IP, multiple 2-way services for mesh and multi-STAR networks VSAT links
- Multi-channels: 2 and 4 channels for 2100/4100, expandable to 6 and 8 channels; or Receive-Only channels

#### Access Methodology
- On-Demand Composite TDM Outbound Carrier using Packet Switching Multiple Access (PSMA)
- Contention Access Slotted Aloha Inbound (CSC-IB) to initiate DAMA activation
- SCPC / MCPC Inbound Carrier for IP traffic services
- Bandwidth-On-Demand (BOD) automatic Inbound Carrier rate adaptability to match real time IP traffic demands

#### IP Features and Routing Function
- Intranet/Internet, Multicast, TCP/HTTP Acceleration
- L-3 Routing, L-2 Bridging, DNS Caching
- Standard & Customized QoS traffic Prioritization Protocols: TCP UDP RIP ARP DHCP ICMP IGMP Telnet PPP FTP HTTP SMTP SNMP DSCP

#### Mechanical & Environmental
- RJ-45, 10/100 Base T Ethernet Interface
- RS-232 Asynchronous Serial Interface to ACU
- AC Power, IEC-320 Interface 110-240 VAC 47-63 Hertz, 120 watts, 24VDC @ 3.5A
- Dimensions: 43 x 250 x 310 mm Desktop/Rack Mount Unit
- Weight: 2.2 Kg
- Operational: 0 to +45 degrees Centigrade
- Humidity: Up to 95 % non-condensing
- Storage: -30 to +70 degrees Centigrade

### Certification
- 47 CFR FCC Part 15, Subpart B; Canada ICES-003, issue 4; CE EN-55022 Class A, EN 61000-3-2, EN-61000-3-3, EN-55024, EN-61000-4-3/5/8.