



Pro Range

SIL PICO
SIL MICRO
SIL LITE
SIL MAX
SIL BASE

5.1GHz – 5.8GHz
Wireless Links



OVERVIEW

The PRO Range is a class leading outdoor wireless transmission system that is designed to be easy to install and is extremely compact and rugged. Optimised for the highest capacity and long range. The PRO Range also supports Advanced Encryption Standard (AES) approved for use to protect Government Classified Information.

The PRO range is ideal for connecting networks in distant buildings and is perfect for use with CCTV and VoIP transmission due to ultra low latency.

Features

- **Point-to-Point** up to 1, 2, 6 or 40km with Integrated Antenna
- Up to **100 Mbps**, upgradable up to **500 Mbps** duplex data Throughput
- Up to **1000 Mbps** on the SIL MAX 1000
- **Point-to-MultiPoint**
- External Omni or Sector Antenna
- Built in 360° or 90° Sector
- Rugged case design for outdoor applications
- SNMP
- AES Encryption up to 256bit
- MIMO with Spatial Multiplexing
- DFS (Dynamic Frequency Selection)
- TPC (Transmit Power Control)
- PoE 802.3af
- WEB Management
- Surge protected radio and PSU
- Rugged mounting brackets
- SilverView Network Management Software
- 2 Year warranty

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Distributed By:

Technical Specifications

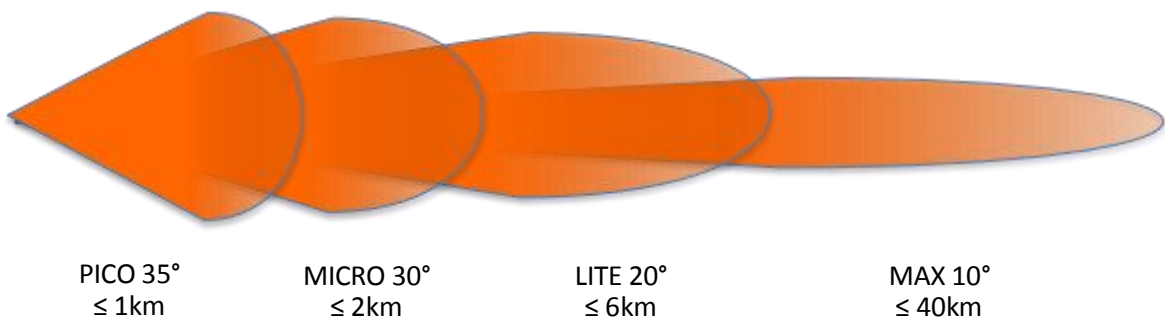
PRO Range	SIL PICO PCP (up to 1km paired Link)	SIL MICRO PCP (up to 2km paired Link)	SIL LITE PCP (up to 6km paired Link)	SIL MAX PCP (up to 40km paired Link) SIL MAX 1000-PCP (up to 20km paired Link)
Radio Specification				
Transmission rate	11ac: Up to 1.3Gbps, 11n: Up to 300Mbps, 11a Backwards Compatible			
MIMO	2x2 or 3x3 (MAX 1000) Spatial Multiplexed Streams			
Throughput	Up to 100Mbps as standard, upgradable up to 500Mbps via software key. SIL MAX 1000-PCP up to 1000Mbps			
Modulation	HT-OFDM with BPSK,QPSK, 16QAM, 64QAM, 256QAM			
Standards	IEEE802. 11ac, IEEE802. 11n, IEEE802. 11a			
Channel Size	5MHz, 10MHz, 20MHz, 20/40/80/160MHz			
Channel (Country Dependent)	USA(FCC): 5.150-5.250GHz/5.725-5.850 GHz Canada(ISED): 5.725-5.850 GHz Europe(ETSI): 5.47-5.850 GHz UK and EU Band B: 5.47-5.725 GHz UK and EU Band C: 5.725-5.850 GHz			
Operating frequency	5. 1GHz - 5.8GHz			
RF output power	Up to 30dBm from ports			
Sensitivity	-82dBm@54Mbps, -74dBm@300Mbps, -68dBm@1.3Gbps			
Operating Mode	AP, Station and Bridge			
Antenna	12dBi Integrated Dual polarised Antenna (H+V)	15dBi Integrated Dual polarised Antenna (H+V)	18dBi Integrated Dual polarised Antenna (H+V)	23dBi Integrated Dual polarised Antenna (H+V) 18dBi - Tri polarised Antenna (45° +45° +V)
Horizontal/ Vertical BW	35° x 35°	30° x 30°	20° x 20°	10° x 10° 60° x 8° for MAX-1000
Security - Network				
802.1x, Radius, QoS, Vlan	Supports 802. 1x Client and Server and Supports Radius Client, 802. 11i, Asymmetric Bandwidth Control, 802. 1Q: Management, trunk, access and transparent mode			
Electrical – Interface				
LAN/WAN	10/100/1000BASE-T(RJ-45) LAN Port (with Auto MDI/MDIX)			
Power	6 watts (typical), 16 watts (max) DC 24~48 (48~56) Volt or POE (included in kit 100-240vac)			
Surge Protection	6KV			
Management				
Remote Connection	Web, Telnet, ssh, SilverView Monitoring			
SNMP	SNMP V2			
Firmware	Upgradeable via web			
Physical				
Dimensions	Unpacked radio 11.9 x 12 x 4.5 (cm) each	Unpacked radio 17.9 x 12 x 4.5 (cm) each	Unpacked radio 21.5 x 21.5 x 7.7 (cm) each	Unpacked radio 37 x 37 x 9 (cm) each
Weight	Unpacked radio 0.3Kg Each	Unpacked radio 0.5Kg Each	Unpacked radio 1.6Kg Each	Unpacked radio 2.5Kg Each
Dust and Waterproof	IP66 Certified		IP67 Certified	
Mounting Bracket	Steel Bracket	3 Axis Magnesium alloy , wall or pole mount (included in kit)		
Environment				
Operating Temperature	-20~70°C (Storage -40~90°C)			
Humidity	0~95 % (non-condensing)			
Other				
Warranty	2 Year Parts and labour (extendable to 5 Years)			
MTBF	60000 Hrs			
Pack Contents	2x Radios, 2 x POE injector, 2 x Basic Mounting bracket sets	2x Radios, 2 x POE injector, 2 x Mounting bracket sets	2x Radios, 2 x POE injector, 2 x Mounting bracket sets	2x Radios, 2 x POE injector, 2 x Mounting bracket sets

Technical Specifications

PRO Range	SIL BASE-360 (Outdoor Radio with Built in 360° Omni Antenna)	SIL BASE-90 (Outdoor Radio Built in 90° Sector Antenna)	SIL BASE (Multipoint single radio)
Radio Specification			
Transmission rate	11ac: Up to 867Mbps, 11n: Up to 300Mbps, 11a Backwards Compatible		
MIMO	2x2 Spatial Multiplexed Streams		
Throughput	Up to 100Mbps as standard, upgradable up to 500Mbps via software key		
Modulation	HT-OFDM with BPSK,QPSK, 16QAM, 64QAM, 256QAM		
Standards	IEEE802. 11ac, IEEE802. 11n, IEEE802. 11a		
Channel Size	5MHz, 10MHz, 20MHz, 20/40/80MHz		
Channel (Country Dependent)	USA(FCC): 5.150-5.250GHz/5.725-5.850 GHz Canada(ISED): 5.725-5.850 GHz Europe(ETSI): 5.47-5.850 GHz UK and EU Band B: 5.47-5.725 GHz UK and EU Band C: 5.725-5.850 GHz		
Operating frequency	5.1GHz - 5.8GHz		
RF output power	Up to 30dBm from ports		
Sensitivity	-82dBm@54Mbps, -74dBm@300Mbps, -68dBm@1.3Gbps		
Operating Mode	AP, Station and Bridge		
Antenna	4 x 360° x 45° Omni Antennas (Built in)	13dBi Integrated Dual polarised 90° x 15°Sector Antenna (H+V) (Built in)	2 x Ntype female Sockets (H+V) Optional – 120/90 Sector antenna or 12dBi Dual polarised Omni
Security - Network			
802.1x, Radius, QoS, Vlan	Supports 802. 1x Client and Server and Supports Radius Client, 802. 11i, Asymmetric Bandwidth Control, 802. 1Q: Management, trunk, access and transparent mode		
Electrical – Interface			
LAN/WAN	10/100/1000BASE-T(RJ-45) LAN Port (with Auto MDI/MDIX)		
Power	6 watts (typical), 16 watts (max) DC 24~48 (48~56) Volt or POE (included in kit 100-240vac)		
Surge Protection	6KV		
Management			
Remote Connection	Web, Telnet, ssh, SilverView Monitoring		
SNMP	SNMP V2		
Firmware	Upgradeable via web		
Physical			
Dimensions and Weight	Unpacked radio 18 x 18 x 25 (cm) 2Kg	Unpacked radio 45 x 17 x 6.5 (cm) 2.3Kg	Unpacked radio 22 x 22 x 7.5 (cm) 1.6Kg
Dust and Waterproof	IP66 Certified	IP67 Certified	
Mounting Bracket	Steel Bracket	3 Axis Magnesium alloy , wall or pole mount (included in kit)	
Environment			
Operating Temperature	-20~70°C (Storage -40~90°C)		
Humidity	0~95 % (non-condensing)		
Other			
Warranty	2 Year Parts and labour (extendable to 5 Years)		
MTBF	60000 Hrs		
Pack Contents	1x Radios, 1 x POE injector, 1 x Basic Mounting bracket set	1x Radio, 1 x POE injector, 1 x Mounting bracket set	1x Radio, 1 x POE injector, 1 x Mounting bracket set

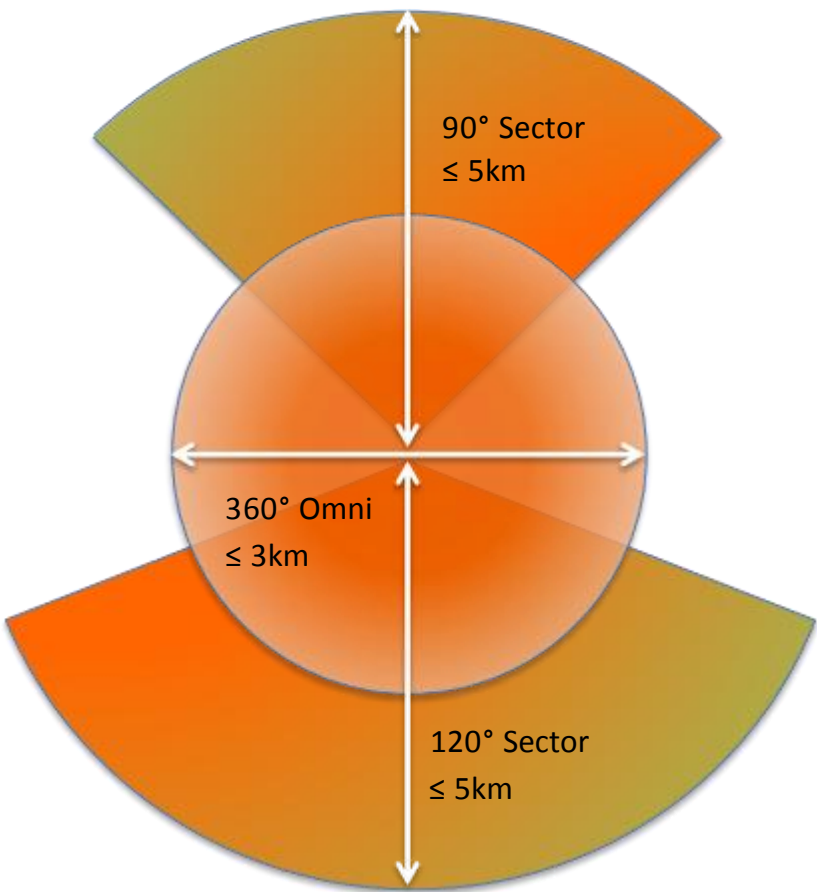
Antenna Examples

Point to Point

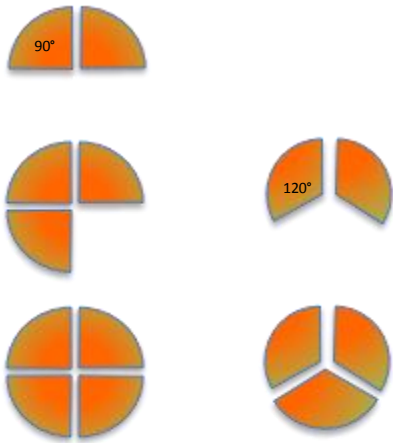


Point to Multipoint

Beam Patterns



Antenna System Options



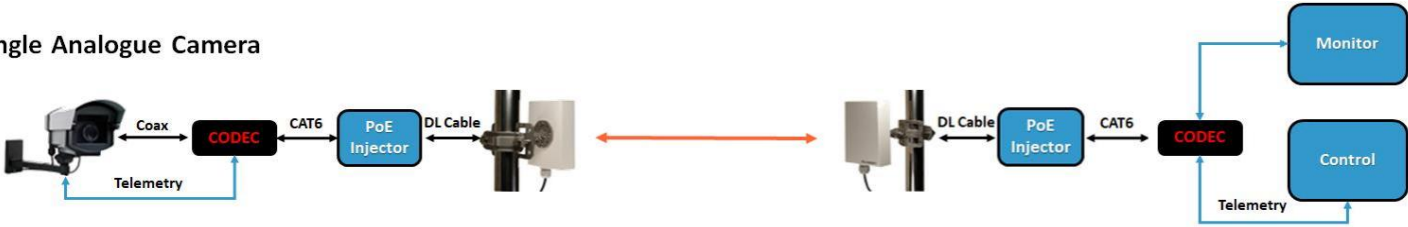
NOTES:
The **SIL BASE** can be fitted with either;
• External 12dBi Omni Antenna (≤3km)
• External 16/20dBi 90°/120° Sector Antenna (≤5km)

The **SIL BASE 90** has a built in 90° Sector Antenna (≤5km)

The **SIL BASE 360** has built in 360° 5/7dBi Omni antennas (≤500m)

Point to Point

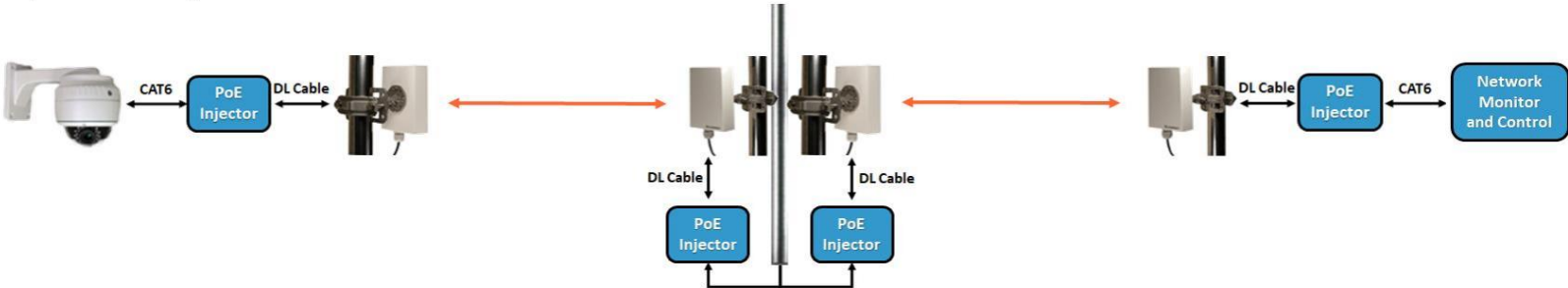
Single Analogue Camera



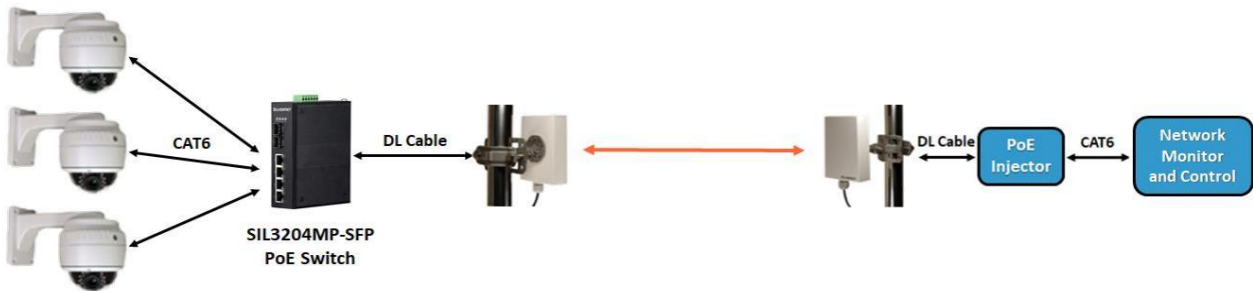
Single IP Camera



Repeater for Single IP Camera



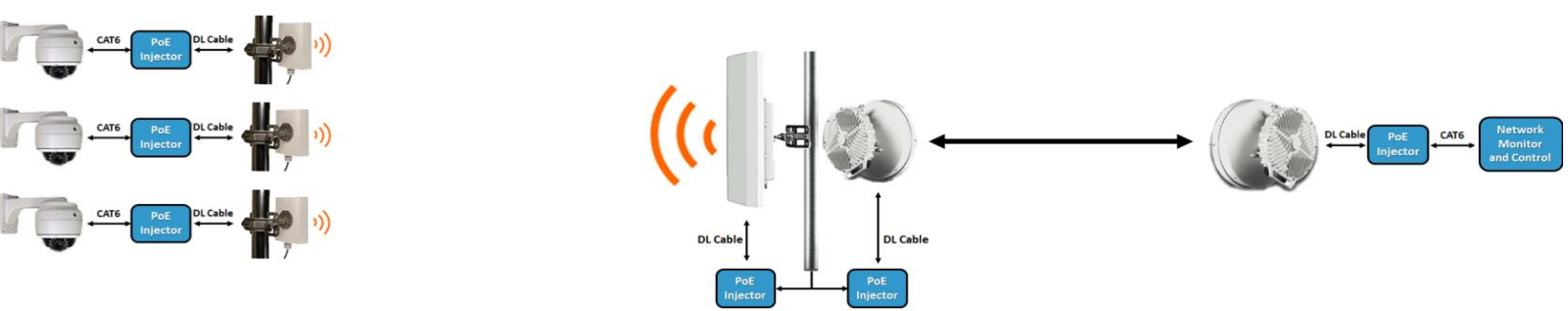
Multiple Camera Point to Point



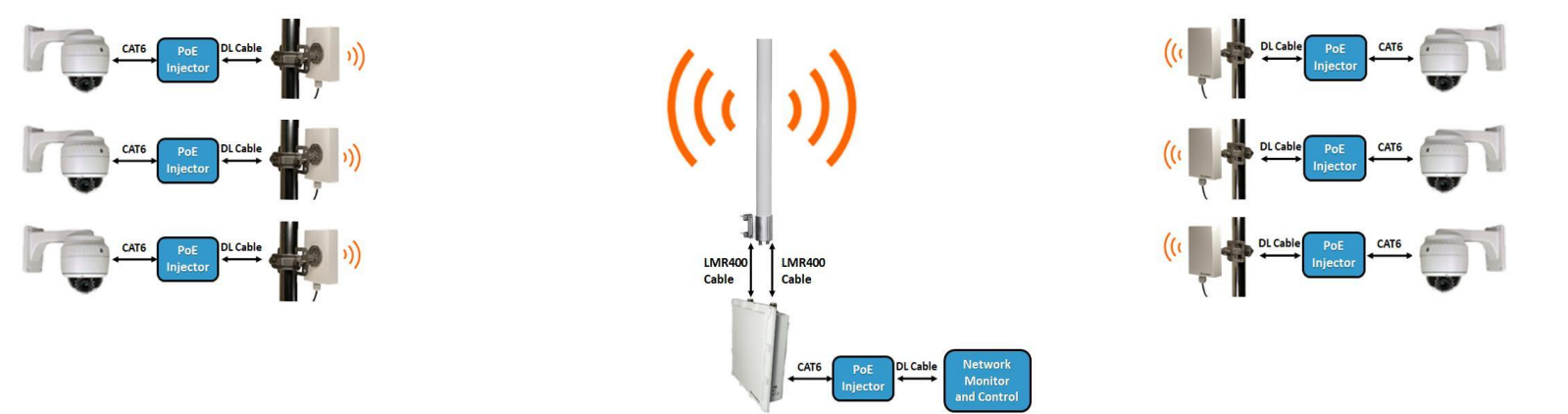
Part Code	Description
SIL PICO PCP	100Mbps up to 1km with built in dual polarised antenna.
SIL MICRO PCP	100Mbps up to 2km with built in dual polarised antenna.
SIL LITE PCP	100Mbps up to 6km with built in dual polarised antenna.
SIL MAX PCP	100Mbps up to 40km with built in dual polarised antenna.
SIL 100-PCP-U240	Single radio software upgrade from 100Mbps to 240Mbps.
SIL 240-PCP-U500	Single radio software upgrade from 240Mbps to 500Mbps.
SIL 100-PCP-U500	Single radio software upgrade from 100Mbps to 500Mbps.
SIL MAX 1000 PCP	1000Mbps up to 20km with built in dual polarised antenna.

Point to Multi-Point

Point to Multipoint with Base 500-90 and Relay with Backhaul



Point to Multipoint with Omni Antenna



Multipoint Base

Part Code	Description
SIL BASE	Multipoint base, up to 100Mbps with 2 x Ntype connectors for external antenna
SIL BASE 90	Multipoint base, up to 100Mbps with built in dual polarised 90. sector antenna.
SIL BASE 360	Multipoint base, up to 100Mbps with built in dual polarised 360. Omni antenna.

Multipoint Clients

Part Code	Description
SIL PICO	100Mbps up to 1km single radio with built in dual polarised antenna.
SIL MICRO	100Mbps up to 2km single radio with built in dual polarised antenna.
SIL LITE	100Mbps up to 6km single radio with built in dual polarised antenna.
SIL 100-PCP-U240	Single radio software upgrade from 100Mbps to 240Mbps.
SIL 240-PCP-U500	Single radio software upgrade from 240Mbps to 500Mbps.
SIL 100-PCP-U500	Single radio software upgrade from 100Mbps to 500Mbps.

Long Range Point to Point

Long Range Point to Point with Dish Antenna



Long Range Point to Point with Grid Dish Antenna



Part Code	Description
SIL BASE 500 DAN 5829	Long range point to point link with 29dBi dish antenna. Includes 2 x radio, 2 x PoE injector PSU, 2 x tilt and swivel bracket, 2 x Ntype to Ntype cables
SIL BASE 500 DAN 5832	Long range point to point link with 32dBi dish antenna. Includes 2 x radio, 2 x PoE injector PSU, 2 x tilt and swivel bracket, 2 x Ntype to Ntype cables.
SIL BASE 500 DAN 5834	Long range point to point link with 34dBi dish antenna. Includes 2 x radio, 2 x PoE injector PSU, 2 x tilt and swivel bracket, 2 x Ntype to Ntype cables.
SIL BASE 500 GAN 5824	Long range point to point link with 24dBi grid antenna. Includes 2 x radio, 2 x PoE injector PSU, 2 x tilt and swivel bracket, 2 x Ntype to Ntype cables.
SIL BASE 500 GAN 5829	Long range point to point link with 29dBi grid antenna. Includes 2 x radio, 2 x PoE injector PSU, 2 x tilt and swivel bracket, 2 x Ntype to Ntype cables.

FCC Statement

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

ISED RSS Warning:

This device complies with Innovation, Science and Economic Development Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ISED Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Le rayonnement de la classe B respecte ISED fixaient un environnement non contrôlés. Installation et mise en œuvre de ce matériel devrait avec échangeur distance minimale entre 20 cm ton corps.

Note : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.