

# **INFINITI Technology Platform**

## **At the Leading Edge of Biofeedback**

While clinicians, therapists and researchers have long considered Thought Technology products to be the “gold standard”, we continue striving to raise this standard even higher. Our goal is to expand the exciting potential of behavioural, psychophysiology and non-invasive medicine in the 21st century, so that we may further enhance human health and well being.

### **Introducing the Infiniti Technology Platform**

The Infiniti Technology Platform incorporates the latest advances in hardware and software architecture. Its modular design offers maximum flexibility and ease of use across a wide range of applications. The Infiniti Technology Platform features:

- Powerful data-acquisition features
- Cutting-edge multimedia biofeedback
- A library of application-specific Clinical Suites
- Clinical tools for assessment and training
- Extensive data review and analysis functions
- Personalized session reports
- Enhanced trend reporting on client progress

### **Full Compatibility**

Current users of Thought Technology products can rest assured that the new Infiniti Technology Platform will work perfectly with their existing hardware or software. For example, the new **ProComp Infiniti** encoder device is completely compatible with existing BioGraph software, while ProComp+ users will find that it performs seamlessly with the new **BioGraph Infiniti Legacy** software suite.

Of course, using the new **ProComp Infiniti** hardware together with **BioGraph Infiniti** software allows you to take full advantage of all our new features and enhancements.<sup>1</sup>

### **Infiniti Hardware Platform**

Our new ProComp Infiniti and FlexComp Infiniti encoder devices incorporate leading-edge technology, yet we have also succeeded in maintaining the signal quality and integrity that made earlier generations of Thought Technology hardware synonymous with quality and reliability.

The new Infiniti Technology Platform uses high-speed USB connections and can store data directly to Compact Flash memory for fast and incredibly powerful data logging to ensure that researchers and clinicians can acquire all the information they need. Other new features include:

- User triggered auto re-calibration
- Integrated impedance checking
- Multi-modality encoder
- Automatic sensor recognition

<sup>1</sup> See our software brochure for more information. This brochure describes the encoders in their Infiniti modes not Legacy settings.

## **ProComp Infiniti**

The ProComp Infiniti is a new eight-channel, multi-modality encoder that has all the power and flexibility you need for real-time, computerized biofeedback and data acquisition in any clinical setting.

The first two sensor channels provide ultimate signal fidelity (2048 samples per second) for viewing RAW EEG, EMG and EKG signals. The remaining six channels (256 samples/sec) can be used with any combination of sensors, including EEG, EKG, RMS EMG, skin conductance, heart rate, blood volume pulse, respiration, goniometry, force, accelerometers<sup>2</sup>, torsionmeter<sup>2</sup> and voltage input.

In short, the ProComp Infiniti covers the full range of objective physiological signals used in clinical observation and biofeedback.

Housed in an ergonomically designed case and requiring only a USB port, ProComp Infiniti can be used with any IBM-compatible laptop or desktop PC. What's more, ProComp Infiniti can capture data in real time by connecting directly to the PC via fiber-optic cable, or it can store data on a Compact Flash memory card for uploading later to the PC.

ProComp Infiniti comes complete with:

- 14 bit resolution, eight-channel ProComp Infiniti encoder unit
- TT-USB interface unit
- Fiber-optic cables (1' and 15')
- Four alkaline "AA" batteries
- Sleek fabric storage and carrying case

## **ProComp 2™**

The ProComp 2™ is a compact yet powerful two-channel device that allows clinicians to set up a second clinical system – or to empower their clients by offering them a take-home device that is convenient to wear on a headband or a shirt collar.

The ProComp 2™ contains a built-in EEG sensor (simply connect an extender cable for EEG monitoring and biofeedback), and it can use any two of the ProComp Infiniti sensors. The ProComp 2™ system contains all the peripherals to easily connect it to a desktop or laptop IBM-compatible PC.

## **Benefits for you and your clients**

- Add additional training rooms to your clinic quickly and economically
- Promote training in the home environment to improve outcomes
- Enhance long term compliance
- Monitor peripheral measures as well as EEG
- Quality and expert support from Thought Technology

<sup>2</sup>Contact Thought Technology or your local representative for availability

## FlexComp Infiniti

Our top-of-the-line encoder is the ideal data acquisition and physiological monitoring device for power users. It offers 10 high-speed channels (2048 samples/sec.) with 14 bits of resolution (1 part in 16364) and can acquire data from any Thought Technology sensor.

Researchers, surface electromyography (SEMG) specialists and ergonomists will appreciate its ability to monitor and record SEMG and displaying it as raw, median frequency, RMS, peak-to-peak, 2D and 3D frequency and power spectrum. Up to four encoders (each using up to 10 channels) can be connected simultaneously to produce the largest possible “window” into the subject’s physiology.

FlexComp Infiniti offers internal, user-activated calibration to ensure that you can always obtain the highest quality signal, without the costly downtime associated with factory re-calibration.

FlexComp Infiniti is a total monitoring and biofeedback system with a wide range of applications in psychology, psychiatry, clinical research, physical therapy, primary care, and sports medicine. Compact and easy-to-use in tethered and un-tethered situations, using fiber optic (for real time monitoring) or Compact Flash (for remote data storage) modes, FlexComp Infiniti offers a tremendous range of capabilities and the power to deliver instantaneous analysis of complex data.

When combined with Infiniti software FlexComp Infiniti provides flexible, high-speed processing of high-resolution data and allows clinicians to choose from a full range of user-defined screen configurations for specific applications or client profiles, using mouse or keyboard controls.

## Complete range of sensors

Thought Technology’s advanced design and active electronic sensors meet exacting standards for instrument accuracy, sensitivity, durability, and ease of use. All sensors are completely non-invasive and require little or no preparation for use.

Surface Electromyography (SEMG)	Blood Volume Pulse waveform, heart rate, and amplitude
Electroencephalography (EEG)	Skin Conductance
Skin Temperature	Electrocardiography (EKG)
Respiration waveform, rate, and amplitude	Voltage Isolation
Goniometer	Force sensors
Torsiometer <sup>2</sup>	Accelerometers <sup>2</sup>

<sup>2</sup>Contact Thought Technology or your local representative for availability

## SPECIFICATIONS

	<b>FlexComp Infiniti (SA7550)</b>	<b>ProComp Infiniti (SA7500)</b>	<b>ProComp2</b>
Size	5.1" x 3.7" x 1.5" (130mm x 95mm x 37mm)		2.2" x 2.8" x 0.75" (55mm x 71mm x 19mm)
Connection to PC	Fiber Optic to USB through TT-USB interface unit		Fiber Optic to USB (TT-USB) or COM port (Pro-SB)
Sensor type	External sensors		Internal EEG (Channel A) External (Channels B, C, D)
Impedance Checking (with EEG-Z sensor)	All channels		Channel B only
Self-calibration	Yes		No
Compact Flash memory storage	Yes		No
Fast channels (rate, bandwidth)	10 channels, 2048 samples/sec DC – 512Hz	2 channels, 2048 samples/sec, DC – 512Hz	2 channels, 256 samples/sec, DC - 45Hz (shared with slow channels)
Slow channels (rate, bandwidth)	Emulated protocols only	6 channels, 256 samples/sec, DC – 64Hz	2 channels, 32 samples/sec, DC - 8Hz (shared with fast channels)
Emulated protocols	ProComp Infiniti, ProComp+	ProComp+	ProComp+ (2 channels active)
Power source	4AA batteries, single-use alkaline or NiMH rechargeable		1 AA battery, single-use alkaline
Battery life (alkaline cells)	30 hours typical, 20 hours minimum		10 hours typical
ADC output (native protocols)	14 bits		13 bits

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